




Volume 4 Issue 2
July / August
1994

International QL Report

DILWYN JONES COMPUTING'S



PAGE DESIGNER 3

written by Barry Ansell

THE NEXT GENERATION

PD V1.05	Page : 1 of 1	F2 MENU	F4 PREVIEW
	Page size : 1200x1576	F3 VIEW	F5 STATUS
	Screen at : 0:0	CF1 Zz	ESC (QUIT)
Cursor at : 164x76			

DESKTOP PUBLISHING PROGRAM

IQLR.....

Contents.....

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Articles submitted for publication should be on a 3.5" DD disk in Quill or Text87 format. To enhance your article (if at all possible) send Saved Screen dumps produced with the Sbytes command. Please specify where in the text you would like the screens placed.

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EDITORIAL

Newport, Rhode Island, USA - The Editorial Staff

It is with sadness that we report to you the final issue of SINCLAIR QL WORLD published by Arcwind Ltd of the UK. Long the bell-weather of the QL community first as SINCLAIR QL USER and most recently SINCLAIR QL WORLD it stood alone as the one commercially produced magazine.



Over the past years it had overcome some traumatic experiences, including the mysterious death of Robert Maxwell while it belonged to the Maxwell stable, then to an interm group and then the sale to Arcwind Ltd. Through all of this, Helen Armstrong held SINCLAIR QL WORLD together.

Without Helen's tireless effort and dedication it is doubtful it would have survived the Maxwell trauma. We ALL owe Helen a debt of gratitude. Let us add our names to the list of people who gratefully acknowledge Helen Armstrong for all she has done to promote the QL. THANK YOU!! Helen.

Along with the last issue of SINCLAIR QL WORLD was a letter from Arcwind stating that they were in the process of negotiations with other publishers with the hope that SQLW would continue to be printed and that in due course would inform their subscribers as to the outcome. We are one of the other publishers who have begun negotiations with Arcwind and we will try to keep you informed as to our progress.

As most of our readers know IQLR is a labor of love, and our only concern is that IQLR pay for itself, all our articles are contributed by our readers. We would love to be able to fund the continuance of Simon N Goodwins very popular D-Y-I series and other SQLW stalwarts. Unfortunately we cannot afford the expense and maintain our current subscription and advertising rates while publishing over 60 pages per issue.

We see a bright future for the QL/QDOS, just look at all the new developments released in the past year and all the new ones in the planning stages. Add to that, the tremendous growth and support we've received and the obvious comes to mind, IQLR intends to be around for a long, long, long time.

Changing our train of thought, we had a MAJOR SNAFU with the delivery of our last issue that affected all our UK and a few of our European readers. We posted by AIRMAIL on the 25th of April, in its infinite wisdom the US Post Office sent the package by SEA (boy !! it never pays to brag about ALWAYS being on time), you all know how long that took. We apologize for the inconvenience. Included elsewhere in this issue is an apology from the US Postal System, they assure us this problem won't happen again, they have even issued us special light weight mailing bags to help expedite shipment.

(Publisher's Note: You may have noticed the new graphic along side the title of this article. The old one showed a very orderly Editorial meeting. Dick Taylor (and a few others) suggested that the new graphic was nearer to reality at CRUNCH time (when we actually put the issue together). I kind of liked the old one, but bow to the majority. What do you think ??)



June 2, 1994

Mr. Robert Dyl
Publisher, IQLR
15 Kilburn Court
Newport, RI 02840-2718

Dear Mr. Dyl:

This letter is in response to your inquiry concerning the delivery of your IQLR report to Great Britain sent on April 25, 1994.

Our records indicated that your mail was sent by sea rather than by air. As we discussed, it was through no fault of yours that the mail was delayed. I regret you did not receive our normal service with this mailing.

I apologize for the inconvenience this matter has caused you. If I may be of further assistance please let me know.

Sincerely,

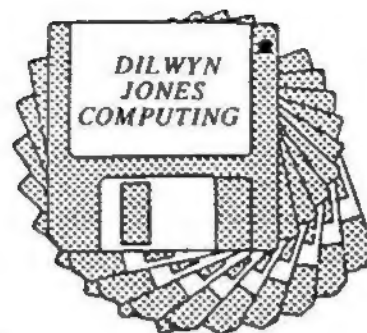
A handwritten signature in cursive script that reads "Carl A. Papino".

Carl A. Papino
Manager, Consumer Affairs/Claims
24 Corliss Street
Providence, RI 02904-9631

PAGE DESIGNER 3

Shelby Township, Michigan, USA - John J. Impellizzeri

Page Designer 3 (PD3) is the long anticipated next generation desktop publisher. It operates under the extended environment (pointer environment) and takes advantage of many of the environment features. PD3 can be controlled almost completely by mouse, and though a mouse is highly recommended, it can also be used from the keyboard. With PD3 you can mix text in numerous different fonts and sizes with graphics to make posters, banners, signs, club newsletters, etc.



I have used the program to create some signs for work. The new building I work in contains a lot of sensitive electronic equipment and I made signs stating 'No smoking, food or drink beyond this point' to protect the equipment. Printed using a DeskJet 500 printer and mounted in a frame, these signs rival anything that we could have purchased commercially and were far cheaper. I've also used PD3 to produce the advertisements for QBox-USA that have appeared in IQLR.

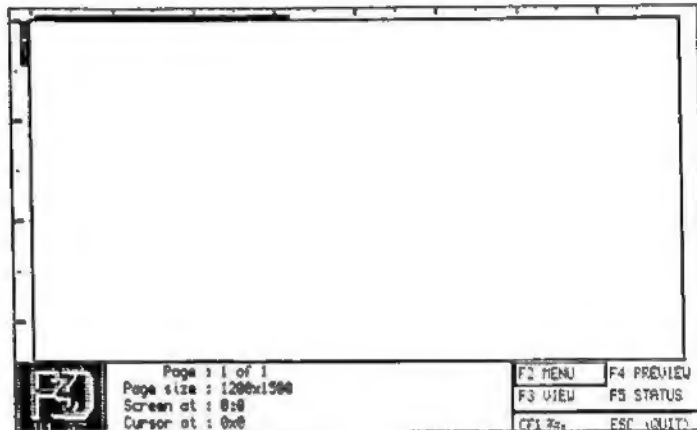
Running PD3 requires Toolkit 2, at least 512K of memory and the extended environment. These extended files are included. (Pointer environment, window manager, hotkey system and menu extensions). PD3 is compiled with Qliberator and the runtimes are included. It works well with the Gold Card, new Super Gold Card and Minerva. PD3 comes on four 720K disks. Disk one contains the program itself along with the various files that are needed to configure and start the program. It also has utility programs that let you reconfigure the built in printer driver, convert fonts and pages from other desktop publishing programs to PD3 format, and font and graphic pattern editors. Disk two has extra printer drivers, assorted text fonts and graphic patterns. In addition it contains high definition fonts (HDF) from PD1 & PD2 that were converted for use in PD3. Disk three has more HDF fonts. Disk four has some sample clipart material that was converted from art available for other computer systems.

After making a working copy from the original disks (easy to do as there is no copy protection), you need to configure PD3 so it knows how much memory to allocate for itself, where to look for page files, fonts, etc. Don't worry about being committed to something once you've set it. Any settings in PD3 can be easily changed in the future. You also need to know some information about your printer. Having your printer's manual handy while configuring the program is advised. Setting up any program that must output to a printer always seems to cause headaches for users. Fortunately PD3's manual is better than some in explaining the concepts behind such things as dots-per-inch, density and how they relate to the pixels on the screen and the resulting printout. If setting up printer drivers gives you headaches, take heart in the fact that the built in driver in PD3 will drive most any Epson compatible 9 pin printer, and the external drivers will drive most any Epson compatible 24 pin printer (including color versions), and the Deskjet driver will drive the HP Deskjet series of printers (also including color versions) without requiring any additional setup. I verified that the 9 pin and Deskjet drivers work just fine as delivered with my Seikosha and Deskjet printers. If you have a printer with additional or different features, then each driver can be custom configured for your printer.

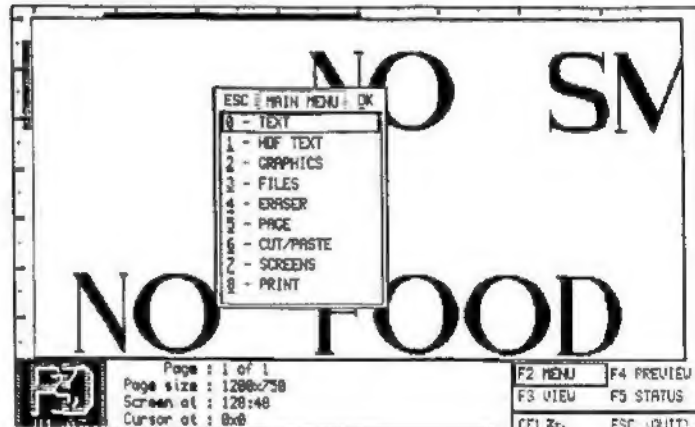
PD3 uses the MenuConfig program to alter its built-in defaults. MenuConfig should be familiar to anyone using pointer environment programs. If it's not, the manual has a step by step procedure on how to use it to set up PD3. There are quite a few options that can be altered. This allows you to set up PD3 to suit your particular hardware, any additional software you may be running, and your preferred fonts, patterns, page sizes, number of pages, etc. You can work on two pages and switch between them without having to save and reload (memory permitting).

PAGE DESIGNER 3 - (CONT'D)

Once you have it configured you can either use the supplied boot file to start PD3 which will load and install the extended environment and then start PD3. If you usually have the environment loaded you can simply EX PD3. Upon startup a few default fonts and patterns will be loaded and an example page loaded and displayed. A nice touch during the startup is that a progress report is presented on the screen showing each file as it is being loaded rather than a blank screen and a disk drive crunching away leaving you wondering what is happening.



(screen 1)



(screen 2)

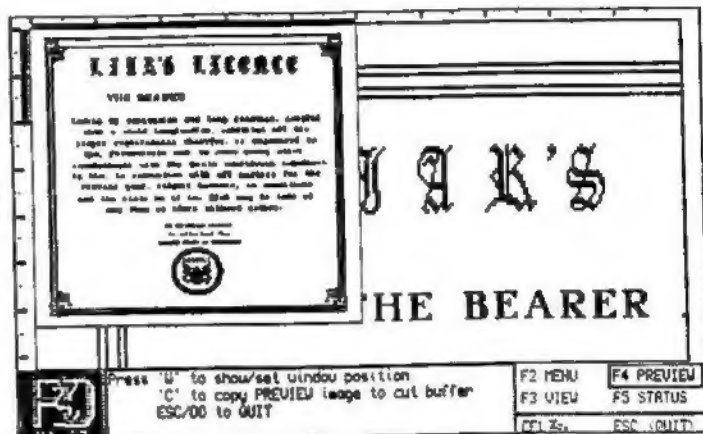
The main screen in PD3 (see screen 1) has a large working area which only displays a part of the whole page. Below this is a status and prompt area. The small area in the lower right corner is the main menu. Selecting the Menu option with either the mouse or the F2 key brings up a further menu of items each of which takes you further into the program (see screen 2). View allows you to pan and scroll the working area around the whole page. You can tell where you are on the page by the scales on the top and left edge of the working area. The solid bar indicates the current view relative to the entire page. There is also the option to move very quickly to any edge of the page. Because this is a handy and often used function, it is also available from other menus in the program. You do not need to get back to the main menu to move around the page. There are a number of other handy functions like this available at multiple places within PD3. This is nice as it saves having to wade through a series of menus. The preview option (which is one of these) lets you get an idea of what your printed page will look like. The entire page is reduced in size while retaining

its relative proportions so you can get a pretty good idea of what to expect (see screen 3). Four different contrast levels are available for the preview. One of them will give a clear picture depending on how much detail is in your page. While your page is being previewed, you have a couple of options. One allows you to position a block which represents the working area anywhere on the page and have that section of the page displayed. A second option is to save the previewed image in the cut buffer. The cut buffer is used to save some small section of the page for use elsewhere on the same or another page. It has its own menu in another part of the program. The PD3 manual says that you can 'achieve some spectacular effects' using this. F5 or Status brings up a display window giving additional information about the current state of the program (screen 4).

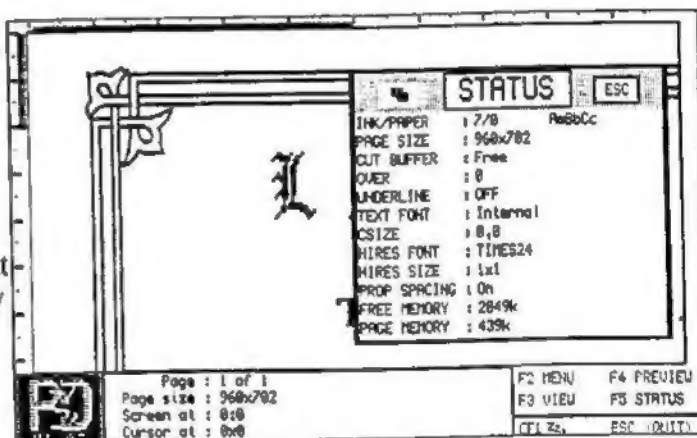
PAGE DESIGNER 3 - (CONT'D)

The final two main menu options are to quit (confirmation is asked) and to put the program to sleep and into a button. Pointer environment users will know what this is. Basically it halts the program and closes its windows down but leaves all data intact and creates a button or very small window which when selected with the mouse/keyboard will 'wake up' and restore the windows and restart the program where you left it.

Text can be typed in manually or imported from either an ASCII text file or a Quill document file. You can use any of a number of different fonts, select the size of the text (according to QDOS CSIZE rules), and select paper and ink colors. Underlining and the overwrite status (standard QDOS settings) can also be chosen. For typing in text manually, you can specify the width of the area in that the text will be placed. This is handy if you want to have a column of text next to a picture. The same option is also available when importing text but it is handled from a different sub-menu. While PD3 was not intended to be an editor or word processor, it does include the basic text editing commands including a few extras that allow positioning the cursor at pixel level. If you're going to be using a lot of text on the page, it is probably better to type it into your favorite editor/word processor and then use PD3's import function. Importing straight ASCII text is quite easy for any program to handle but dealing with a Quill '.doc' file is another story so I was quite pleased to see the ability of the program to import directly a file from Quill. You have quite a few options when importing text that allow you to customise the way that the text appears on the page. Some of the possibilities can seem a little confusing at first but if you read the manual and experiment importing a few files with different options set, it begins to make sense.



(screen 3)



(screen 4)

There are some powerful facilities here: Text can fill the entire page, be restricted to a single column or can fill multiple columns. If you already have something on the page and importing text would overwrite it, no problem, just turn the 'protect graphics' option on. A border around the page can also be protected in the same way via another option. Character sizes, characters per line, justification and margins can all be set before the import begins. PD3 allows you to import a file line by line so you can check to make sure things are going the way you want in addition to letting you scan through a file and select specific parts to be imported while skipping others.

Another very helpful and sure to be used often function is the 'Centre, Snip, Expand' option. This allows a line or lines of text or a picture/graphic to be automatically centered on the page. It can also be used to remove or add blank space to the page to fine tune the layout.

PAGE DESIGNER 3 - (CONT'D)

After selecting this item, you define an area on the page by height (the full width of the page is assumed) and then select which function you want applied to this area. It works very well and very fast. Since this is another often used item, it appears on more than one menu.

Using High Definition Fonts (HDF) for text is a separate menu than standard text fonts but many of the same things can be done as with the standard fonts. HD fonts are better used for large characters since they have high resolution and will appear much smoother than a standard font blown up to a large size. Character sizes and spacing can still be set. In addition, a proportional spacing option is available for HD fonts. Importing text using HD fonts is similar to importing using the standard fonts except for a few changes dealing with the specifics of the HD fonts. An extra feature for HD fonts is that the font can be changed by adding a backslash and a font number to your original text and then importing the whole file rather than importing part of it, manually changing the font, and then continuing with the import. Typing in text is also similar to the standard text font method, but again with a few changes due to the HD fonts being handled in a different way.

If all you needed was text on a page, any of the QL word processors would work just fine. Since you probably want some sort of graphical design or picture on the page the graphics menu allows this type of design work to be done. Some of the options in this menu deal with patterns. A pattern is a graphical design that can be used fill an area, create a border around the page or used as a paint brush. There are facilities to load and select from among the patterns included with PD3. Creating a border around the page is easy as there is a routine to do this. It can be used to insert or remove a border using the currently selected pattern. It works very fast in either direction (removing or inserting). Note that the border should be removed prior to using the Centre function elsewhere in the program or else the centering won't appear to work properly. Actually it does, but the border gets included and it's already centered!

Ink, Paper and Over status can be set (according to QDOS rules) from the graphics menu. An enclosed area can be filled with an ink color (Paint Fill) or a pattern (Pattern Fill). There are two sub menus for drawing on the screen. One will let you easily draw boxes, circles, ellipses, lines & arcs using the mouse or cursor keys. This is similar to the methods used in many other graphics programs for the QL that I've seen. You can also draw free hand with the mouse/cursor keys in four line widths. A finer option is used to slow down the pointer movement in relation to the mouse/keys for precise adjustments. This finer option also appears at many other places in the program where positioning the pointer is being done. With it off, you can rapidly move around the screen. With it on, small changes are easily made.

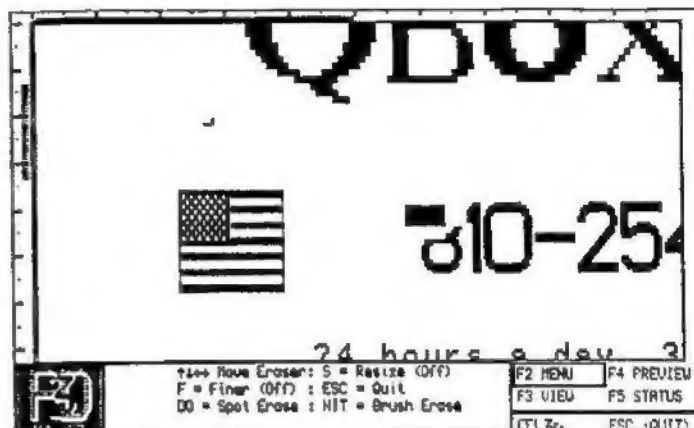
The windowing option in the graphics menu allows you to define an adjustable size block on the screen and then select an action to be performed on the window. Actions available are: Clear the window (works like a giant eraser), pan and scroll the contents of the window, invert the colors, recolor and remove color. The recolor lets you change all red to green for instance. Remove color replaces red and green with black and white stipples.

If using the graphics facilities doesn't get the picture or design you wanted on the page, or if you have a picture or screen already saved from another source, PD3 lets you load in standard QL screen files and place them anywhere on the page. You can also save any screen-sized portion of the page as either a standard QL screen file, a PD3 compressed file or a Painter compressed file. Being able to load in screen files lets you use clipart created for the QL and even other computers in PD3, as long as you can get the artwork into QL screen format (or PD3 page format). I was able to take a DOS disk containing clipart in PCX format, use Xover to convert the files to QDOS format, then use the Convert-PCX program to convert the files to both QL screen and PD3 format and then use them in PD3.

PAGE DESIGNER 3 - (CONT'D)

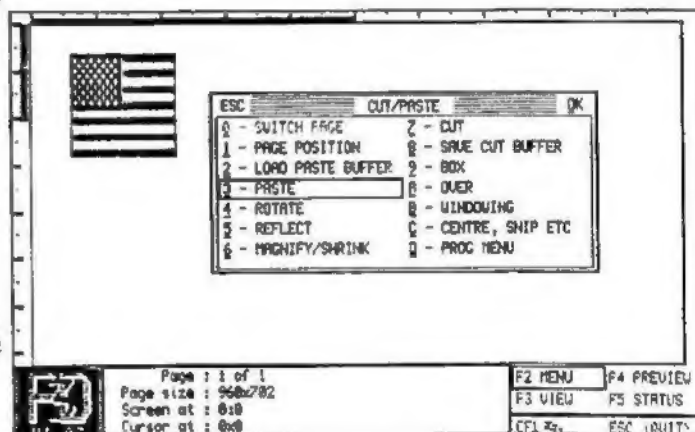
There are other graphics converters available for the QL too (Ergon's Open World, Carlo Delhez's GIF utilities) which opens up a large range of clipart that can be used.

Since we all make mistakes occasionally, a very well done eraser function is available at a few strategic places in PD3. The eraser can be varied in size and its movement controlled by the finer option (See screen 5). You can do a spot erase by placing the eraser over the area and pressing Enter or Do on the mouse. You can also 'drag and erase'. This is done by holding the space bar or Hit button and moving the eraser. Anything under it is erased. In case you make a mistake trying to erase another mistake, you are given the choice of keeping or forgetting any changes you just did by erasing. Sort of a erase the erasing! This choice appears at many places in PD3 giving you a final out before committing any changes. Very nice!



(screen 5)

The Files menu is where your page design can be saved or previous designs loaded in. You can also load fonts (both regular and HDF) and patterns from this menu too. Any saving and loading in PD3 uses the menu extensions which makes it very easy to select a file. From this menu you can format a new disk if needed. Two further options concern saving and loading the cut buffer. The manual has full details of the file formats used by PD3 so you can use these files in your own programs if you wish.



(screen 6)

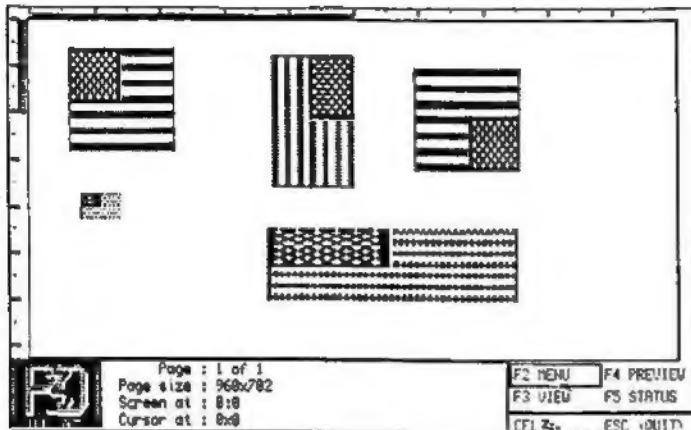
A somewhat related menu is the Page menu.

Saving and loading a page is here as in the files menu, but there are some page specific functions here. You can clear the page while keeping the same size or you can define a new size of page to be designed. Copy will do just that if you are working with two pages. Copying can be done from either page to the other. Merge is similar but allows a smaller page to be merged or copied to a larger one. Normally, to load a page, it must have the same dimensions as the program is currently set for. The position of the smaller page can be moved anywhere on the large page. A small section of the current page can also be saved for use later on.

Cutting and pasting is an often used phrase when talking of DTP programs. PD3 has these facilities and they offer some very impressive ways of manipulating objects on the page (see screen 6). Before you can use these, there needs to be something in the cut buffer. You can 'cut out' a small part of a page to be used elsewhere on the same page or in another design. Defining the area to be cut out is easily done with the mouse or cursor keys. Anything put into the buffer can be saved and reloaded in the future. Paste will place a copy of the buffer wherever you specify on the page. The other options allow you to modify the image in the cut buffer. Screen 7 shows the original image that was cut out of a page and reloaded into a blank page in the upper left corner. Then this image was rotated 90 degrees (any rotation from 0 to 360 degrees can be specified).

PAGE DESIGNER 3 - (CONT'D)

There is an option given for a rotation to try and smooth the effects of rotating some images that are caused by the pixel shapes of the QL. Sometimes it looks better and sometimes it doesn't.



(screen 7)

As with most features in PD3, you are always given a chance to abandon any changes you just made in case you made a mistake or don't like the results. Reflect was done next. Both horizontal and vertical reflections can be done. The size of the image can also be changed during the reflection. If you just want to change the size of the image there is the Magnify/Shrink option. Again the mouse/cursor keys are used to define the new size and position of the image. The two lower images in screen 7 were made by shrinking and then magnifying the original image. The routines are quite

fast but magnifying a complex image to a large size can take a little while. There are also a few duplicate functions from other menus found here as they come in handy while cutting and pasting.

This cutting and pasting ability allows you to use an image from the supplied or other clipart pages in your own page design. Simply load the clipart page, cut out the image desired, save it to disk if you intend to use it often, then paste it on to your own page. The American flag image in the QBox ad was cut out from one of the supplied clipart pages and pasted onto the ad page.

Now that you've got the ultimate page designed you need to be able to get it on to an actual piece of paper. PD3 has a built in printer driver capable of driving most Epson compatible 9 pin printers. The driver is fully configurable in case your printer has extra features or uses an oddball code or two. The section of the manual dealing with using and configuring the built in driver is quite good. It explains the terminology and concepts used in printing the page to the printer. The print menu allows you to preview the page if you wish, or print it using a number of options. This driver worked just fine on my Seikosha SP-1200 without changing anything.

If you use a 24 pin or Deskjet printer (or a printer that will accept and understand the Deskjet printer language), then you have to use an external program to drive the printer. These are supplied on the PD3 disks configured for Epson compatible 24 pin and the Deskjet series of printers. There are two ways of using these programs. They can load a saved page from PD3 and print it out or if you load in a small code file before starting PD3, then the external drivers can directly access the page in memory from PD3. Both of these external drivers are configurable for the defaults that they start up with. I wasn't able to test the 24 pin driver but the Deskjet routine works very well. It can use any of the Deskjet's print densities.

There are some other auxillary programs included with PD3. One of these is an alternative printer driver that is more advanced than the built in driver and can be configured to work with 8, 9 and 24 pin printers. It has additional features such as half or double size printouts, landscape mode, grey scale shading, multiple pass, multiple copies and more. There are three editor programs for editing standard fonts, HD fonts and patterns. I did not spend much time reviewing these as there are so many fonts and patterns included with PD3 that I haven't gotten to the point of wanting to edit any of them yet. All of them appear to be quite extensive with many helpful features.

PAGE DESIGNER 3 - (CONT'D)

Two more programs concern themselves with converting fonts and pages produced with other DTP programs into a format that can be used in PD3. I did not review the font converter (Fountain) for the same reasons above: so many are supplied, I haven't needed to go searching for more. However I did try to use the page converter called Pager as I had some old pages from Front Page and Page Designer 1 that I wanted to convert to PD3 format. Unfortunately I could not get the program to work as it kept stopping with QLiberator runtime errors. The original files loaded fine into their original programs so I know that they were not corrupted over the years. As I have an earlier version of PD3 (1.07), this may be fixed in current versions. One last extra program is a utility to grab screens from another program so you can use them in PD3 and also to capture pictures or designs that can be used to design HD font characters.

Page Designer 3 is a very comprehensive desktop publishing program. It has many useful and powerful features making the design of a page as easy as possible. The programs use of the extended environment simplifies many of the tasks of setting up and editing a page. It comes with an excellent manual which explains a lot of the terminology used in DTP and all of the features of the program. I highly recommend it.

PD3 is available from Dilwyn Jones Computing in the UK and Mechanical Affinity in the USA.

QBOX-USA



810-254-9878

A new high-speed modem
is now online that
supports connect speeds
of up to 14,400 baud



QBox-USA is a BBS set up by QL enthusiasts for QL enthusiasts.
The system runs entirely on a Sinclair QL. We maintain a link (Fidonet)
with European BBS's that carry QL related message areas. With QBox-USA
North American QL users can keep in touch with our fellow QL users in Europe
and keep up with the latest developments for the QL and QDOS.

We are currently carrying the following message areas:

INTERNATIONAL QL, MINERVA, QUANTA and QBOX.

There are also file areas that contain many programs available for download.
Just a few of the files available are: QIPI, QFAX, Zip/Unzip, QIterm, QIGIF
and many more! There is no charge to use QBox-USA other than normal phone
call charges. Please give QBox-USA a try!

We look forward to your call!

produced using Page Designer 3

QUANTA



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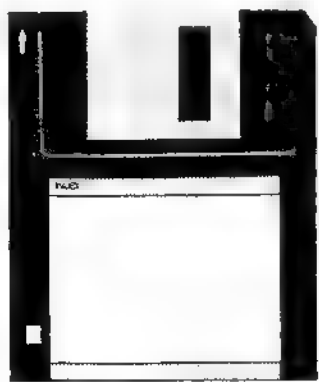
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213 Manor Road
Benfleet
Essex
SS7 4JD
Tel. (0268) 754407



Swedish QL User Group

We have survived! Despite the large number of years since both the QL and our group first saw the light of day we still carry on with our activities in the group.

We have member meetings in two locations in Sweden (Gothenburg and Linköping) every month. Normal meeting activities range from hardware fixes on the QL trough program language lessons to the exchange of QL-related information.

We publish a newsletter - QLBladet - 4 to 6 times a year, depending on the level of activity in the group. In the newsletter you can read about (in Swedish...) the latest news in the QL world, ideas from fellow members, how the QL can be used for desktop publishing, programming hints, etc.

We also maintain our own software library. At the moment it is under reconstruction, but it used to be more than 15 disks in the library. On top of that we have QUANTA sub library services for Quanta members.

For further information please contact:

Johan Boman, Swedish QL User Group, Toftaåsgatan 73, S-421 47 Västra Frölunda, SWEDEN.

Tel.: Sweden - 31 29 75 28

Internet f3bjb@fy.chalmers.se

Below you will find the same text in Swedish, for all our Swedish readers.

Svenska QL Gruppen.

Vi har överlevt! Trots att det gått ett stort antal år sedan både QLen och vår grupp först såg dagens ljus, så fortsätter vi med våra aktiviteter i Svenska QL Gruppen.

Vi har medlemsmötet varje månad på två platser i Sverige: Göteborg och Linköping. På dessa möten behandlar vi allt från hårdvaru-fixar på QLen över programmerings-lektioner till utbyte av QL-relaterad information i största allmänhet.

Vi ger ut en tidning - QLBladet - 4 till 6 gånger per år. Utgivningstakten varierar beroende på hur hög aktiviteten är bland medlemmarna. I QLBladet kan man läsa om det senaste skvallret inom QL-världen, idéer från andra medlemmar, hur man kan använda QLen för att producera trycksaker, programmerings-tips, osv.

Vi har också ett programbibliotek, som innan den pågående omorganisationen innehöll över 15 diskar fulla med program. Vi har också hela QUANTAs bibliotek som en service åt Quantamedlemmar i Sverige och övriga Norden.

Mer information kan du få från

Johan Boman, Svenska QL Gruppen, Toftaåsgatan 73 S-421 47 Västra Frölunda, SWEDEN.

Tel.: Sweden - 31 29 75 28

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LIGHTNING SPECIAL EDITION

If you are using a QL in any shape or form or with any accessory (including the new Super Gold Card, QXL, Gold Card, Trump Card, ST/QL, Thor, PC CONQUEROR, Minerva, TURBO, and even the humble unexpanded microdrive-only QL), you really should be using **LIGHTNING SPECIAL EDITION**. If not, you are very severely and unnecessarily (the program is cheap) slugging your system's performance. The superb **LIGHTNING SPECIAL EDITION** is capable of both automatically and very significantly accelerating almost every aspect of QL operation - whatever it is you use the QL for. *"More than 10x is achievable and 2x-4x is typical"* (quoted from page 24 of review in April '90 QL World). The speedup ratio is virtually independent of the system. However fast or slow is your QL hardware, **LIGHTNING SPECIAL EDITION** will accelerate it much further. All recent versions of our software are carefully optimised for 16/32-bit processors, without compromising 8-bit working. The program has not got any adverse side effects at all, and it fixes certain malevolent (i.e. lock-up or corruption inducing) anomalies. Installing it is a fast, once-only operation that takes two or three minutes and which assumes & requires absolutely no knowledge of programming or of anything even remotely technical about the QL: you are simply asked whether you wish to speed up text, maths and graphics individually, or everything. Unless you have a very good reason, opt for everything! Then **LIGHTNING SPECIAL EDITION** copies itself onto your boot-up disks, instantly modifying their **BOOT** files. Now every time you start up, full throughput acceleration is automatically invoked and everything goes much smoother and faster. In case you think that this is too good to be true, we quote verbatim the concluding para of the Sinclair QL World review: *"I could not fault Lightning Special Edition on anything. It is a clear winner and a best buy at £49.95"*. The program includes a bundle of accessories (e.g. change screen attributes including character sizes, colours and fonts in other programs - even in Quill, smooth scrolling and much more) and tweaks (vary maths and/or graphics precision, a null device, a drain and much more). Stop reading the manual where we tell you to - at around page four - if simple use is all that you want. The program also includes 84 excellent small fonts for use with **PERFECTION SPECIAL**

EDITION, PROFESSIONAL PUBLISHER and other programs - a real bonus!

LIGHTNING SPECIAL EDITION includes both a ROM (for plugging in at the back of your QL - no screwdriver needed) and a disk (or cartridge, if that is what you specified). As some QL hardware (QXL; either Gold Card for speed reasons) is not ROM-efficient, or you might have something already plugged in (ICE, TK2 if not already on your disk interface), you should opt for the version of the program minus the ROM for just £39.95: this is the **GOLD CARD VERSION**. If you have two QLs, say one of them a QXL / (Super) Gold Card and one "ordinary", you should go for the full **LIGHTNING SPECIAL EDITION**, as you can use the ROM on the second machine. Extra ROMs cost £10 if ordered at the same time as the program, else £15.

Q1) What programs benefit from **LIGHTNING SPECIAL EDITION** (LNGSE), and how much? A1) All programs, including PC emulators, benefit. Perhaps our **PERFECTION SPECIAL EDITION** benefits most. Interestingly, the more competently an application is implemented, the greater its expected acceleration from LNGSE..... This is because all good programs contain very fast-working code: their only bottleneck is the QL ROM, in which they may end up spending a proportionately large amount of time. LNGSE cures the congestion. Q2) Why didn't DP build LNGSE into all its programs? A2) It would be very inefficient to do it that way: because of multitasking, you'd pay for the RAM-space over and over again, let alone all the wasted disk space. Also, LNGSE benefits all programs, not just our ones. Q3) Does the QL "know" it is running LNGSE? A3) No, and there is no operating overhead either. And the QL isn't "running" LNGSE in any sense of the word. In its first and only tenth of a second of life, LNGSE pages out, using a door deliberately left open by the QL's forward-thinking designer, large chunks of QDOS (AH, JM, JS, MG and all Minerva operating system variants) and replaces them with our fine-tuned supercode. The door was carefully designed so that even the most errant programmer would not abuse it. After that, the QL has no way of knowing it has been "taken over". Q4) I'm concerned about compatibility. While I've heard only good reports about LNGSE, I've read about other products being involved in conflicts with application programs. A4) Firstly, LNGSE is not a replacement for the

whole of the ROM, only for some parts. We have, therefore, not had to make ad hoc changes to any of the many good bits, in order to avoid copyright problems. As explained in 3), we are in fact using a route specifically designed into the QL to enable ROM code to be efficiently patched. Secondly, we are very pragmatic about "improvements" and bug-fixes: one man's bug is another man's feature. Of course the original ROMs had faults - but most of these are benign and well-known (DP can supply an official bug-list to customers). To fix most such bugs would be unwise, as a lot of existing software probably either takes some advantage of, or side-steps, them. If you fix the bugs, some of this software is liable to fail, perhaps in subtle ways (all the more dangerous). It is quite unproductive apportioning blame in such cases - it is irrelevant whose fault it is: if the end-user gets software problems, it is simply **VERY BAD NEWS** for everyone. LNGSE avoids these pitfalls by accurately emulating all harmless QL anomalies (much harder than fixing them - we have to foresee all outcomes of the oddities). To give but one example, the QL's line-drawing routine often draws lines the wrong length (>1 pixel out). LNGSE could easily fix this (in fact, LNGSE provides a software switch to opt for correcting) but we default to emulating this anomalous behaviour. If we did not, many grid-drawing programs would end up producing odd-looking results, as their authors have understandably had to set line lengths "wrong" in order to get the right length on-screen. Consequently, LNGSE is - yes - fully compatible with everything. Q5) Is LNGSE a compiler? A5) No - **TURBO** is. Naturally, LNGSE greatly improves the performance of compiled programs, and by a better than multiplicative ratio (the reason for this mathematical effect is given at the back of the LNGSE manual). As most commercial software is compiled, you are the beneficiary! Q6) Why is LNGSE so cheap? A6) The truth is, we know that once you have experienced **LIGHTNING SPECIAL EDITION**, you won't abandon your QL. As **THE QL** software publisher, that is rather good news for us. Q7) One more reason for buying LNGSE? A7) Look at our **SPECIAL DEALS**, and think. **SPECIAL DEALS** can allow you to get additional programs for free, even to get us pay you to buy them! Hint: Combine cheap and dearer programs

BUY LIGHTNING SPECIAL EDITION NOW!

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Relative Speed	1x	1.8x	7x	25x!
Motorola CPU	68008	68008	68000	M68020
Clock Frequency	7.5MHz	7.5MHz	16MHz	24MHz
Bus width	8 bit	8 bit	16 bit	32 bit
RAM fitted	128Kb	896Kb	1,920Kb	3,968Kb
RAM access speed	Slow	OK	Fast	Twice as fast
PCB population	V high	High	V low	V low
Physical dimensions	Monolith	Full-size	Half-size	Half-size
Lock-up frequency	Ouch!	Occasional	V rare	Won't
Battery Backup Clock	No	No	Yes	Yes
Clock Protection level	N/A	N/A	Modest	High
Toolkit II + Manual	No	Yes (early vns)	Yes	Enlarged
Sub-directory support	No	No	Yes	Yes
Parallel/Centronics port	No	No	No	Yes
Spooler/ScreenDump/Ramdisks	No	Yes	Yes	Yes
Speedup switch (Screen#2)	No	No	No	Yes
Future hi-res graphics	No	No	No	Planned
Disk drives supported	N/A	SD/DD	SD/DD/HD/ED	SD/DD/HD/ED
Max no. of disk drives	0	2	3	4
Max sectors/disk	N/A	1,440	6,400	6,400
Max disk transfer rate	N/A	30Kb/sec	120Kb/sec	>120Kb/sec
Peripheral card tolerance	OK	No	No	OK
SCSI-2 compatibility to-be	No	?	No	Yes
Miracle/DP Warranty	No	No	2 years	2 years
DIY/Kit incorporability	Yes	No	No	Yes
Overall Rating by DP	2%	10%	30%	110%

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BLACKKNIGHT VERSION 1.1

Oak Ridge, Tennessee, USA - Doug LaVerne

BlackKnight is a chess-playing program for QDOS and compatibles. It is written by Francois Lanciault of Quebec and distributed by Jochen Merz.

It runs under the Pointer Environment, with or without a mouse. BlackKnight features a 5000 move openings library, chessclocks for each player, the ability to set up positions, load and save games, and other features. It features 10 levels of difficulty (10 levels of play) with average response time from five seconds up to one hour.

The minimum hardware needed to run BlackKnight is a QL with 640K and a disk drive. The documentation I received states it will also work with a Gold Card, the QXL, and Atari ST's equipped with a QL emulator.

MY EXPERIENCES

I've had a number of pleasant games with BlackKnight, partial and completed. About twenty are saved to disk. I've played against various Levels from One to Eight and have run it in Demo mode on Level 10. It has run on a Trump Card, on a Gold Card, and with and without a mouse. No, it hasn't beaten me, or gone into a saved game with a clearly better position, but that's neither here nor there.

I had wanted to exercise this package to the limit of my modest ability and have a good report on its features and capabilities. That could have meant testing its abilities at openings, middlegames, some endgames, play against famous positions of the masters (e.g., would it find the Queen sacrifice in Frank Marshall's famous "Gold Pieces" game?), and more. I would have liked to say the hypothetical average user would enjoy having it.

Unfortunately, I have to give a report on observed problems in the package. Granted, putting together a chess-playing program at all is quite a feat. But this one's behavior is unpredictable. What follows is detailed; I hope the detail gives M. Lanciault the information with which to iron out bugs.

(Ian Bruntlett, writing on BlackKnight in "QL World" III:4, reports technical problems which may crash the QL "so thoroughly the Gold Card clock gets corrupted". He does mention a later version of BlackKnight with some bugs fixed).

I do hope to get back to an improved version in the future. Projects yet to come could include multitasking BlackKnight against Sinclair Chess and playing BlackKnight against ChessMaster 2100.

A human interest note: Actually, this latter scheme did get underway while the material for this review was accumulating. My Minneapolis friend Gordon and I have added to our regular postal chess two BlackKnight vs. ChessMaster 2100 games and two Sinclair Chess vs. ChessMaster 2100 games. BlackKnight is playing at the one-minute and five-minute response levels, and Sinclair is playing at the one-minute and four-minute response levels. BlackKnight is on a Gold Card, while ChessMaster is on a Gateway 386SX/16. Gordon and I have been playing chess since 1977 and postal chess since 1981 when he moved north.

BLACKNIGHT - (CONT'D)

"THE EVIDENCE"

I'll refer to four specific games. Each is identified by a save-file name or names. I'm including diagrams in a commonly-used text-oriented format.

I will mention, since I may not get a useable screen dump into this article, that the BlackKnight display is divided into several windows. The most important ones are the diagram-like Board window to the right, the game score (Moves) window just to the left of that, and a column of various options' icons to the left of that.

The game score is in the traditional format of two columns of moves, White left and Black right. It is listed in "Standard Notation": columns a through h and rows 1 through 8, starting with a1 as White's lower lefthand square (White's QR1 in Descriptive/English notation). I will try as much as possible to include a Descriptive notation translation for any Standard Notation.

There is also a small Analysis window below the Moves window. This displays BlackKnight's "thinking." Part of this is the move BlackKnight is contemplating at any given moment; however, the accompanying numbers that appear I have not figured out.

Moving a piece is accomplished as follows: you put the Pointer Sprite over the piece you wish to move, using the mouse or the arrow keys, and click with the mouse or hit Space or Enter. A white border appears around the square the piece is on. Using the mouse, or using one arrow key or even two arrow keys at once, you guide the piece to its destination square and click, Space, or Enter.

Game 1

The first game I'll refer to is DGL1MATE SAV. It was played at Level 1 (5 second average response time) on a Gold Card without a mouse.

White's 39:E4-B7 (Q-N7) is a checkmate. After E4-B7 was displayed in the Board window and the Moves window, "E4-G6" appeared in the Moves window for a Black move, as if Black had played a 39th move (after being checkmated). Only after "E4-G6" appeared was "Checkmate, I win!" displayed. The board display after "E4-B7 E4-G6" is given in Diagram 1.

```

. k . . . . .
. Q . . . p . p
. . . N . . .
. . . . . p .
. . . . . .
. . . . . .
P . . . . P P P
. . . . N . K .
```

Diagram 1
E4-B7 "E4-G6"
DGL1MATE_SAV

```

. k . . . . .
. Q . . . p . p
. . . N . . .
. . . . . p .
. . . . . p .
. . . . . P
P . . . . P .
. . . . N . K .
```

Diagram 2
"H2-H3 F2-F4"
DGL1MATE_SAV

I retrieved DGL1MATE SAV several days after the original save (again, Gold Card and no mouse). Since the program was displaying "40:" in the Moves window, as if a 40th move would be allowed even after a checkmate, I attempted a 40th move for White. BlackKnight accepted 40 H2-H3 (P-KR3), then responded by putting "F2-F4" in the moves display for Black's 40th move, and by putting a Black pawn, rather than a White pawn, on F4 (see Diagram 2). Finally, it again displayed "Checkmate, I win!" in the Analysis window below the moves.

BLACKKNIGHT - (CONT'D)

BlackKnight now displayed a "41:" in the Moves window, as if wanting a move. So, I tried moving the White Knight on e1 (K1). This time I got an "End of Game/OK" window in the middle of the board.

Game 2

The second saved game is BADISP6G_SAV/OKDISP6G SAV. It is also on a Gold Card, without mouse, at Level 6 (2 minute average response time).

After the machine's/Black's 11 ... 0-0-0 (castles queenside), the Board window and the Moves window agreed. The board position is given in Diagram 3:

```
. . k r . b n r
p p . . . p p
. . p . . . .
. . . . b . .
. . B P p . .
. . N . . . .
P P P . . P P P
R . B . K . . R
```

Diagram 3

11 ... 0-0-0

BADISP6G_SAV

```
. . k r . r . .
p p . . . p p
. . p . . . .
. . . n . b . .
. . B P p . .
P . P . B . . P
. . P R . P P .
. . R . R . . .
```

Diagram 4

18 ... F6-D5/N-Q4

BADISP6G_SAV

I moved the White Bc1 to e3 (B-K3) using the cursor keys, and the Board window showed this. However, the Moves window showed "12 0-0-0". Black then played 12 ... G8-F6 (N-KB3). BlackKnight does castling by allowing you to move the king two squares left or right; it then automatically moves the correct rook to the other side of the king. I now moved my king two squares to the left, from e1 to c1. The Moves window, instead of displaying the symbol for queenside castling ("0-0-0") displayed literally what I had done, "13 E1-C1".

Also, the Board window showed only a white rook on c1, showed no rook on d1, and showed no white king anywhere. I carefully inspected the piece displayed on c1. It was indeed a rook, not a king.

After the machine's 13 ... F5-G4 (... B-KN5), I positioned the sprite on d1, thinking there might be a white rook hidden there, somewhere in the guts of the program. I hit enter, and a white rook appeared on d1. I completed the move 14 D1-D2 (R-Q2), and ended up with white rooks showing on the board on c1, d2, and h1 (QB1, Q2, and KR1). There was still no white king.

A few moves later, Black attacked the Pc3 (the QBP/3) by F6-D5 (N-Q4). The Board window is given in Diagram 4. Note the three white rooks and the absence of a white king. This is the position I saved in BADISP6G_SAV.

I positioned the sprite on c1 and hit Enter, and the Rc1 turned into a king. I finished the move 19 C1-B2 (K-N2) and the Board window was correct. I saved the game a few moves later as OKDISP6G SAV. When I retrieved BADISP6G SAV some time later, the Board window was the same as Diagram 4, except that the piece on c1 (QB1) now displayed correctly as a white king, rather than a rook. The Moves window still had the impossible sequence 11:B1-C3 (N-QB3) 0-0-0 (castles Q) 12:0-0-0 (actually C1-E3, B-K3) G8-F6 (N-KB3) 13:E1-C1 (actually 0-0-0, castles Q)

Game 3

My friend Gordon played GORD2BAD_SAV during his spring visit. That game was on the

BLACKKNIGHT - (CONT'D)

Gold Card, with mouse, at Level 2 (average response of 15 seconds).

Gordon had played 35 A4-A8, checkmating the program. That position is given in Diagram 5:

```
R k . . . . r .
. . p . p . . .
. . . . . p p p
. . . . . . . .
. . . . . . . .
. . P . . Q . P
P . . . . P P K
. . . . . . . .
```

Diagram 5
35 A4-A8 mate
GORD2BAD_SAV

```
R k . . . . r .
. . p . p . . .
. . . . . p p p
. . . . . . . q
. . . . . . . .
. . P . . . . P
P . . . . P P K
. . . . . . . .
```

Diagram 6
35 A4-A8 "F3-H5"
GORD2BAD_SAV

However, the machine (the program) again continued: it displayed "F3-H5", put "Checkmate I win" in the Analysis window, turned the white queen into a black queen and moved it to H5, giving Diagram 6 in the Board window.

An "Oops" removed the black queen from H5 and put a white queen back on F3 (and evidently moved the white rook back to A4; I don't have that detail recorded). ("Oops" tells BlackKnight to take back the previous move). A "Play" then produced 35 F3-A8 (Q-R8) for white and "Checkmate I win", with no following Black move.

When GORD2BAD_SAV was first saved, the Board window contained what's in Diagram 6, including the "black" queen on H5. When it was retrieved some while later, the queen on H5 was white, white's clock was running, and the moves display appeared to expect a move from white--all as if BlackKnight did not know a checkmate had just been played.

Game 4

Another game Gordon played during his visit went into GORD5BAD_SAV and related files. It is a French Defence played at Level 5 (1 minute average response), again on the Gold Card, with mouse.

After 1:E2-E4 E7-E6 2:D2-D4 D7-D5 3:E4-D5 E6-D5 4:G1-F3 G8-F6 5:B1-C3 F6-E4 6:D1-D3 (1:P-K4 P-K3 2:P-Q4 P-Q4 3:PxP PxP 4:N-KB3 N-KB3 5:N-B3 N-K5 6:Q-Q3) we get Diagram 7, with black (the program) to move:

```
r n b q k b . r
p p p . . p p p
. . . . . . . .
. . . p . . . .
. . . P n . . .
. . . N Q . N .
P P P . . P P P
R . B . K B . R
```

Diagram 7
6 D1-D3 (Q-Q3)
GORD5BAD_SAV

```
r n b q k b . r
p p p . . p p p
. . . N . . . .
. . . p . . . .
. . . P N . . .
. . . Q . p . .
P P P . . P P P
R . B . K B . R
```

Diagram 8
Various takebacks
GORD5BAD_SAV

```
r n b q k b . r
p p p . . p p p
. . . N . . . .
. . . p . . . .
. . . P n . . .
. . . . . p . .
P P P . . P P P
R . B Q K B . R
```

Diagram 9
More takebacks
GORD5BD2_SAV

BlackKnight now put "F6-H5" in the Moves window and "Checkmate I win" in the Analysis

BLACKKNIGHT - (CONT'D)

window! There was no piece that could move to H5, no piece displayed on H5 in the Board window, no checkmate or possible checkmate, and, this was the second black move in a row to use F6 as its starting square.

A takeback (an "Oops") put a white knight on C6, changed the black knight on E4 to a white knight, and put a black pawn on F3. (I do not have recorded when we actually made the save file GORD5BAD_SAV; it may have been at this point. When I retrieved GORD5BAD_SAV ten days later, it displayed Diagram 8). Another "Oops" reversed 6:D1-D3. Yet another "Oops" moved the knight on E4 (now white) back to F6. Doing "Oops" again removed 5:B1-C3 from the Moves window but did not change the Board window.

A "Play" here gave 5:F6-H5 "Checkmate I win", and the "white" knight on F6 disappeared from the board. We did a save at this time to GORD5BD2_SAV, then still another "Oops". A black knight appeared on E4. We saved that to GORD5BAD3_SAV.

When I retrieved GORDBD2_SAV the same day as retrieving GORD5BAD_SAV, it showed a Board window as in Diagram 9, and had in the Moves window "1:E2-E4 E7-E6 2:D2-D4 D7-D5 3:E4-D5 E6-D5 4:G1-F3 G8-F6 5:F6-H5 6: 7: ". Retrieving GORD5BAD3_SAV that day got the same Board window, but had the same Moves window minus the "F6-H5" beside white's "5:".

I have a note that goes with either Diagram 7 or Diagram 9 (I don't have a clear record of which but believe it's Diagram 9): a "Play" at that point put "F2-F4" in the Moves window for white, passing the white KBP "over the black(?) pawn on F3 that may or may not be there, and again came the message "Checkmate I win".

(SOME) SUMMARY

As I mentioned, I've had some pleasant games through BlackKnight, whether observing it play itself in Demo mode, or playing against it. Play at Level 10, whether Demo or against the program, was much too slow to bear.

All the takebacks and replays in these games, especially after the program is already confused, may seem silly. However, it is part of what one does in such situations, step-by-step observation of behavior and variations in behavior. I can't call it debugging, since I don't know the program. It is, however, recording of evidence. It also shows that simply taking back moves wouldn't necessarily get the program from a confused state back to a recovered state.

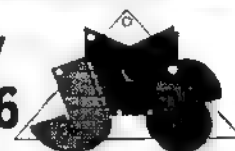
When BlackKnight does stumble, it likes to reuse squares in impossible ways, throw in spurious claims of Checkmate, and to do strange, wonderful and sometimes impossible things to both the pieces on the board and to the game score in the Moves window.

If you <Control-C> from the BlackKnight display to the Command Language (SuperBasic) cursor and do a Jobs command, you observe three chess jobs: "Brain", "BlackKnight", and "ChessClock". I wonder if the jobs, or different internals of one or more jobs, are getting mis-synchronized.

Ian Bruntlett refers to occasional C-language "NULL pointer assignment" crashing his QL and, come to think of it, has somewhat unclear comments about BlackKnight doing odd things when it loses. My testing and playing, however, has never crashed--BlackKnight, it only becomes internally confused.

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with comprehensive manual **DM 165,-**
 Update with new manual (useful if old version is <1.20) **DM 16,-**

QSpread Demo Version - send 3 International Reply Coupons if ordered alone, otherwise enclose a spare disc with an order or update and it is free!

QMON / JMON - Brandnew version of the well-known Monitor, Debugger, Disassembler. Also for the Painter Environment. QMON now recognises the various stack frames and cache handling of the different processors (6800x to 68040). A Trap level can be set, and a permanent breakpoint has been introduced. JMON is a job-monitor with all the features of QMON, but it has got its own, moveable windows, which may be put to sleep etc. - really embedded in the Extended Environment.

New Version (Now English possible!) **DM 94,90**
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NEW! NEW!

QD + QLBERATOR = QBASIC

Finally, it is ready: QBASIC - the interface and the parser was the missing part between QD and QLiberator. Write your BASIC program in QD, press F10 and then the compiler QLiberator can be started and, if the compile run is successful, the resulting program will be started automatically too. No boring save and load, no long loading into BASIC etc. With QD and QBASIC you get the most comfortable BASIC environment you can get under QDOS!

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Owners of QD and QLiberator (QD has to be version 5 or 6) only require the QBASIC extension.

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Available again: Jan Jones: Definitive SuperBASIC Book **DM 42,-**

UPDATES

Updates of our software are usually free. The exception: major changes on a program (a new Version number before the '.'). Always send the master disk(s) to us, together with 4 international reply coupons for up to 5 discs or 8 IRC's for more. If you send updates together with a software order, then the return postage is covered by the wholesale postage. If a disk is faulty, add 1 IRC for a replacement. As the software changes from time to time, you may order a new manual together with the disc updates. With upgrades, you automatically get a new manual.



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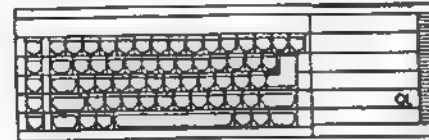
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QL BBS MESSAGE READER V0.10

Santa Clara, California, USA - Jim Hunkins

The first release of the QL BBS Message Reader is now currently available as Freeware. This program allows for easy reading of bulletin board service (BBS) messages off-line. The Message Reader is a standalone program and can accept ASCII message files captured from most terminal programs.

ORIGINAL PUBLIC DOMAIN



SOFTWARE

This release accepts Compuserve message formats and comes with filter programs to use with QBOX and Internet formats. It can currently be obtained on disk through IQLR and will soon be available on QBOX USA and Compuserve (Club Forum) as a zipped format file. The following short article gives the reasons for the program and a brief overview of its capabilities.

Recently, the number of people logging onto bulletin boards has grown tremendously. The QL community has been able to join the rest of the world on-line due to the release of high quality terminal programs, the introduction of the Hermes chip for the QL, and a slew of articles instructing people as to the benefits and methods of being on-line.

However, until now, one major problem has been in trying to read messages on different BBS's. Some services offer 'sorted' messages if you are willing to read messages on-line. But that can get expensive.

The cheaper way of reading messages is to download an ASCII file of all the messages and then manually sort through them off-line. However, as this is time consuming and tedious, many users have been limiting themselves to just messages directed to them.

The QL BBS Message Reader is a tool to simplify and speed up the reading of BBS messages. It accepts an ASCII message file captured from a BBS. No special capture format is required.

It then sorts the messages into a small database and presents them in an organised way, allowing the user to quickly navigate and easily read all messages of interest.

Upon loading a message file, the Message Reader presents a list of all message sections found in the file. Sections can be considered as general topics. For example, on QBOX USA this would include sections such as QUANTA, MINERVA, QBOX, etc.

Upon choosing a section, a list of subjects is offered. These subjects are those found in the subject line of the actual messages.

The user can also pick to view all sections and/or all subjects in a section.

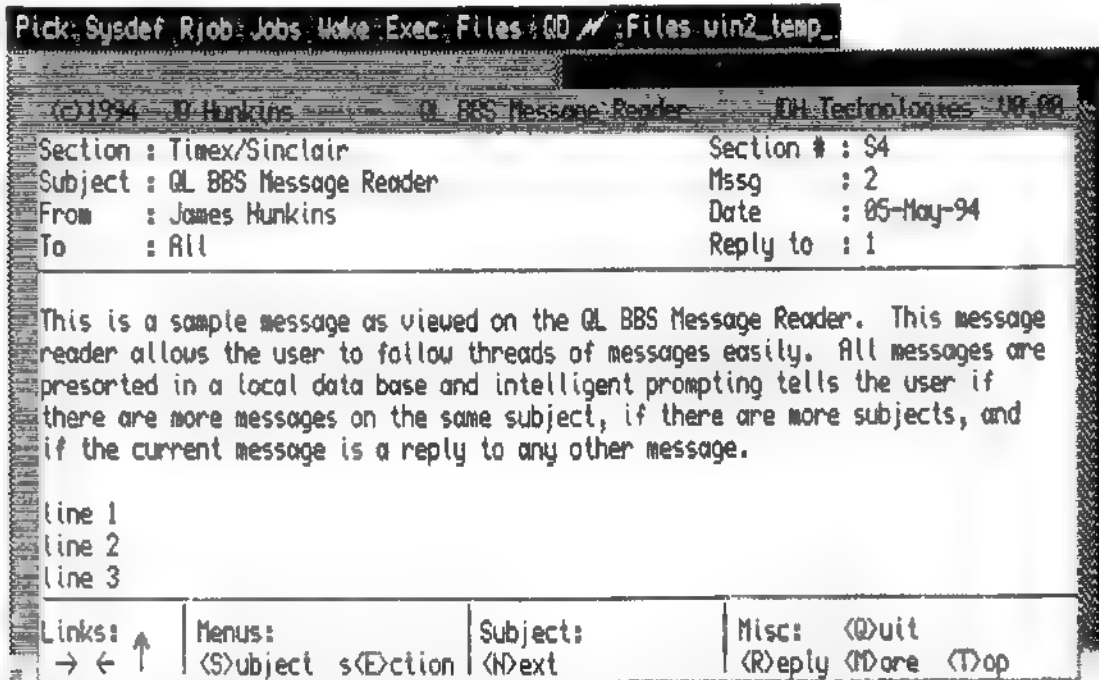
Once the user has chosen the specific subject(s) of interest, the messages are presented for reading one at a time. The included screen dump shows a message being displayed.

From any message, the user can choose what message to read next. Smart Links (only usable links are shown on the screen) are offered to all the messages in the current subject, to other subjects, and even to the original message the current message is replying to (assuming the original message is part of the current data base).

QL BBS MESSAGE READER - (CONT'D)

In short, the BBS user can now easily skip messages that have no interest to him, while quickly zeroing in on all the messages he wants to read in the current session. And all of this off-line, saving both precious time and money.

The QL Message Reader is being offered as Freeware with the express purpose of getting more people on-line. As mentioned previously, the original release allows for use of messages from Compuserve, QBOX, and Internet formats. As other requirements occur, more formats may be added.



The best way to appreciate how much a program like this can help is to try it. I developed the program originally for my own use as I could not stand sorting through 100+ messages at a time to look for the latest information on, for example, the QXL. Due to the interest shown by others, the program has been greatly expanded and now has been released for everyone to take advantage of. Enjoy - and talk to you soon on line.

UPDATE - EVEREX MODEMS

Troy, Michigan, USA - Don Waltermann

In previous issues we discussed the inexpensive Everex 2400 baud modems. I'd like to thank the many people who have let me know that they have been successfully using this modem with their QLs.

A number of users have had a little difficulty getting the Everex to dial out. The modem will respond to AT commands but will not dial out. The fix is to add '&D0dt'. To my knowledge only one Everex has been defective. We had the opportunity to check it out during the Miracle in Newport II show. It apparently had a shorted diode across the relay used to pick up the phone line. I'd like to hear about your results with this modem (good or bad). I can be contacted through IQLR or you can call QBOX-USA 810 254 9878.

The Everex modem is still available for \$8.95 US from Halted Specialties (800 442 5833).

NEW SOFTWARE FROM BELGIUM

PFdata

Very interesting program for all DATA design owners. This program can create hardcopy of your DATA design files using PROforma. This means that you can use a large selection of fonts (as the ones included in LINE design), in any requested size. Also LINE design pictures can be included to add logo's, boxes etc. Several records can be printed on each page, several options for justification etc.

PFlist

Very easy to use program to create listings on any printer (especially inkjet and laser printers). Can include a footer with filename and filedate. Always allows perforation of your pages. The font and fontsize can be chosen (PFlist uses PROforma). PFlist can create your listing in two columns, and landscape (or both).

pfb2pff

This program gives you access to a large variety of fonts for PROforma, LINE design, PFdata, PFlist... It allows you to convert Adobe Type 1 _pfb fonts to PROforma.

Atari SLM804 laser printer driver for PROforma

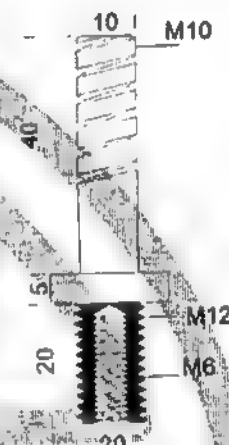
Epson ESC/P2 printer driver, running project, write for details

fax driver for PROforma, running project, write for details

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The graphics library which we developed for LINE design. This library can be used by C programmers, and gives you access to all drawing commands and printer drivers which are used by LINE design, PFdata and PFlist, and even more !!

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PFdata BEF 2000 (1760), PFlist BEF 2000 (1760), pfb2pff BEF 3000 (2700), SLM804 driver BEF 1000 (930), LINE design BEF 5000 (4350), PROforma BEF 5000 (4350), DATA design BEF 3000 (2700), DATA design API BEF 1000 (930) Prices in brackets for customers outside European Community. Payment terms postage is included, send a EuroCheque in BEF, or your VISA / EuroCard / MasterCard number and expiry date. For upgrades, inquire !

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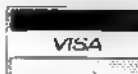
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QL SERVICE MANUAL & CIRCUITS £25.00

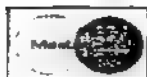
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A Reflection - Editor SE

Massapequa, New York, USA - Bob Gilder

While reviewing the fourth installment of The EDITOR SE, I realized that a screen dump containing the listing of the disk label program with printer control codes never made it into print. I have re-submitted the listing to IQLR with an explanation of each line of the program which appears below.



Please note that there are two disk label listings, side by side within the screen dump. The right hand side is for 5 1/4 inch diskettes and the other for 3 1/2 inch diskettes. The 5 1/4 inch label will contain 10 characters per inch, PICA pitch. The 3 1/2 inch label will contain 15 characters per inch, MICRON pitch. All additional control sequences are identical. The 3 1/2 inch label contains 12 lines of text and graphics, while the 5 1/4 inch label contains 8 lines of text and graphics. You can add or delete lines as you see fit.

```

70 7xÄ 7tÄ7
=====
7WÄ The EDITOR
SPECIAL EDITION
DIGITAL PRECISION7W=
FORMATTED @ 80 TRACKS, 2 SIDES
CAPACITY: 720 SECTORS
AUTHOR: CHARLES DILLON
=====

5.25 Inch Diskette Label

70 7g 7xÄ 7tÄ7
=====
7WÄ The EDITOR
SPECIAL EDITION
DIGITAL PRECISION7W=
FORMATTED @ 80 TRACKS, 2 SIDES
CAPACITY: 720 SECTORS
AUTHOR: CHARLES DILLON

Updated:-----
-----
=====
70 7P 7xÄ

3.5 Inch Diskette Label

Line: 24 Col: 1 Line count: 34 Mode: Insert

```

- Line 1: ESCAPE SHIFT-2 Printer Reset, ESC x CTRL-A Letter Quality ON, ESC t CTRL-A Selects Alternate Character set, ESC 7, Select Graphic Character set 1. Note that the 5 1/4 inch disk label does not set the printer to PICA Pitch, as this pitch is usually the default pitch. The 3 1/2 inch label must have the MICRON Code displayed on the top line as follows ESC-g.
- Line 2: CTRL-SHIFT-ALT-Down Cursor, Inverse Bar printed 38 times.
- Line 3: ESC W CTRL-A, Double Wide Text ON.
- Line 4: ESC W CTRL-£, Double Wide Text OFF.
- Line 5:-7: Add text.
- Line 8: CTRL-SHIFT-ALT-Down Cursor, Inverse bar printed 38 times.

A Reflection - Editor SE - (CONT'D)

Note: Add additional lines of text between both Inverse Bars for 3 1/2 inch labels. There should be 12 lines maximum to fit the recessed label area on the diskette.

Note that there is an additional line of control codes at the bottom of the 3 1/2 inch diskette label which again Resets the printer, selects the default pitch to PICA and retains Letter Quality print ON.

It has been approximately one year that I have stopped using fan-fold diskette labels. Whenever I have tried to recycle a disk and remove then the disk label from it's face - disaster! Some how, I always manage to partially remove the label and then it tears. I have tried using various glue thinners to help, and again the label stubbornly stands firm. So, the next best thing to do is place a new label on top of the old one. That is why I do not use commercial disk labels any more.

All labels that I now produce are printed on fan-fold word processing paper. I slice them to size with a sharp knife and fix them to the diskette with a thin layer of rubber cement. Slightly brush the cement onto the diskette surface and on the back of the label. Wait approximately 30 seconds for the cement to dry and then press the label on to the diskette. If any traces of cement is visible on the diskette, rub it off with a finger. If you have to remove the label from the disk, apply a small amount of rubber cement on a brush or a cotton swab (a Q-tip) and coat the upper seam of the disk label; wait a few seconds and start to remove the label. If a portion of the label appears to be stubborn, apply a little bit more thinner at that particular point on the label until the entire label has been removed.

I have added more ALTKEY assignments for your use with The EDITOR SE, and you will see that there are four ALTKEY assignments for Quill. The Quill AltKEYs are used when I import text files into Quill and then save them as a doc file for IQLR. At the end of the SuperBASIC listing is a chart which you can print out indicating the ALT character and it's related function.

Again, as I have stated in the past, you may alter any of the assigned ALTKEY characters based on your preference of characters or commands. Use this listing as a guide.

```
100  ALTKEY 'a',CHR$(240)&"KM1,4;KC4,1"&CHR$(10): REMark Set Main screen Green
    & Command line Black

110  ALTKEY 'b',CHR$(240)&"b"&CHR$(10): REMark Cursor to bottom of file
120  ALTKEY 'c',CHR$(240)&"BD"&CHR$(10): REMark Block DELETE
130  ALTKEY 'd',CHR$(240)&"BH"&CHR$(10): REMark Set Block Hide
140  ALTKEY 'e',CHR$(240)&"bw.flp2 ": REMark Write a block of text to flp2
150  ALTKEY 'f',CHR$(240)&CHR$(102)&CHR$(32)&CHR$(32)&CHR$(10): REMark Repeat current
    FIND string

160  ALTKEY 'g',CHR$(240)&"BM"&CHR$(10): REMark Block MOVE
170  ALTKEY 'h',CHR$(240)&"BI"&CHR$(10): REMark Block INSERT
180  ALTKEY 'i',CHR$(246)&FILL$(CHR$(209),11)&CHR$(10): REMark resize screen to 11 lines for
    2nd EDITOR

190  ALTKEY 'j',CHR$(240)&"jr"&CHR$(10): REMark Justify text right
200  ALTKEY 'k',CHR$(240)&"KM1,6;KC6,1"&CHR$(10): REMark Set Main Screen
    White with Black Ink, Set Command screen opposite colors

210  ALTKEY 'l',CHR$(240)&"jl"&CHR$(10): REMark Justify text left
```


A Reflection - Editor SE - (CONT'D)

```

220  ALTKEY 'm',CHR$(240)&"SI1;SL1;SR80"&CHR$(10): REMark Set Margins Left
      & Indent to 1, Right to 80

230  ALTKEY 'n',CHR$(240)&"bs"&CHR$(10): REMark Set Block Start
240  ALTKEY 'o',CHR$(240)&"be"&CHR$(10): REMark Set Block End
250  ALTKEY 'p',CHR$(240)&"pr"&CHR$(10): REMark Paragraph reform
260  ALTKE 'q', CHR$(240)&CHR$(100)&CHR$(117)&CHR$(48)&CHR$(10)&
      CHR$(98)&CHR$(48) & CHR$(10)&CHR$(10): REMark Quill Design

270  ALTKEY 'r',CHR$(240)&"r.flp2_": REMark Read a file from flp2_
280  ALTKEY 's',CHR$(240)&"SH"&CHR$(10): REMark Activate Show Status Window
290  ALTKEY 't',CHR$(240)&"t"&CHR$(10): REMark Cursor to top of file
300  ALTKEY 'u',CHR$(240)&CHR$(103)&CHR$(116): REMark Quill GOTO Top
310  ALTKEY 'v',CHR$(240)&CHR$(102)&CHR$(32)&CHR$(32)&CHR$(10) : REMark
      Quill NO Footer

320  ALTKEY 'w',CHR$(240)&"w.flp2_": REMark Write a file to flp2_
330  ALTKEY 'x',CHR$(240)&CHR$(103)&CHR$(98) : REMark  Quill GOTO Bottom
340  ALTKEY 'y',CHR$(240)&"W.ser1"&CHR$(10): REMark Block Write current file to printer
350  ALTKEY 'z',CHR$(240)&"z"&CHR$(10): REMark Zap file
360  ALTKEY 'f',CHR$(240)&"rc.flp1_f_cmd"&CHR$(10): REMark Activate f_cmd

```

ALTKEY Assignments

```

d BLOCK HIDE
c BLOCK DELETE
e BLOCK WRITE text to flp2_
g BLOCK MOVE
h BLOCK INSERT
n BLOCK START
o BLOCK END
y BLOCK WRITE file in memory to printer
a MAIN SCREEN GREEN and COMMAND line BLACK
k MAIN SCREEN WHITE and COMMAND line BLACK
i RESIZE Editor screen at 11 lines
m MARGINS left & Indent at 1 and right at 80 columns
t TOP of file
b BOTTOM of file
f FIND string
j JUSTIFY RIGHT
l JUSTIFY LEFT
p PARAGRAPH REFORM
r READ a file form flp2
s SHOW STATUS window
w WRITE a file to flp2_
y WRITE a file to printer
z ZAP file
f Activate f_cmd file

```

QUILL Assignments

```

q DESIGN default settings at 0
v Footer none
u TOP of file
x BOTTOM of file

```

QPAC2 (MY) BOOT

Trafford, Alabama, USA - Bob Madaris

There has been a lot said and written about QPAC 2. The designer of this program (Mr. Tony Tehby) made it flexible and adaptable to most all situations. In so doing, many have trouble getting started using this program. It is not one of those pieces of software that we buy, put it in the drive and away we go. It is a great tool to allow you to do what you want to do. There simply can not be a step by step guide to suit each user.

There is a public domain package of programs by Jeremy Davis called QPACer that is very helpful in setting up a boot program. My copy has a bug or corrupted, but the sample boot programs joggled my grey matter enough to set up a boot for my use.

The following boot program is what I generally use for most sessions on the QL. Figure what you would like to load in and put on buttons so you can jump in and out of each one. Then make changes in this program to suit your needs. Memory is one of the considerations. (I sure need ED drives

```
90 REMark QPAC 2 boot for Bob Madaris
100 TK2_EXT
110 PRT_USE ser,ser
120 SPL_USE ser1
130 REMark The following is for the DESKJET 500 printer. Change to your needs.
140 OPEN#3,ser1:PRINT#3,CHR$(27);"&";"k";"3";"G";CHR$(27);{"1";"0";"U"
150 PRINT#3,CHR$(27);{"1";"s";"0";"p";"1";"0";"h";"1";"2";"v";"0";"s";"0";"b";"3";"t";"2";"Q"
160 PRINT #3,CHR$(27);"&";"k";"1";"W";CHR$(27);"&";"s";"0";"C"
170 CLOSE #3
180 LET D$=DATE$: IF D$(10)=0:d=11: ELSE d=10
190 REMark now let's put the DATE in a string so we can HOTkey it later.
200 IF D$(6 TO 8)="Jan" :Dm$="January "
210 IF D$(6 TO 8)="Feb" :Dm$="February "
220 IF D$(6 TO 8)="Mar" :Dm$="March "
230 IF D$(6 TO 8)="Apr" :Dm$="April "
240 IF D$(6 TO 8)="May" :Dm$="May "
250 IF D$(6 TO 8)="Jun" :Dm$="June "
260 IF D$(6 TO 8)="Jul" :Dm$="July "
270 IF D$(6 TO 8)="Aug" :Dm$="August "
280 IF D$(6 TO 8)="Sep" :Dm$="September "
290 IF D$(6 TO 8)="Oct" :Dm$="October "
300 IF D$(6 TO 8)="Nov" :Dm$="November "
310 IF D$(6 TO 8)="Dec" :Dm$="December "
320 DATA_USE flp1_:PROG_USE flp1_
330 REMark ***** Start with MODE 4 *****
340 MODE 4
350 REMark as I don't have ED drives I have to use both floppies to boot up with.
360 REMark *** load Albin Hessler's EASY extensions ***
370 LRESPR "flp2_easyext"
380 REMark ***** Load Lightning *****
390 LRESPR "flp2_lng_TEXT_ext"
400 LRESPR "flp2_lng_GRAF_ext"
410 LRESPR "flp2_lng_MATH_ext"
420 :
430 REMark ***** Load Extended Environment, and QPAC2 *****
440 LRESPR "flp2_PTR_GEN"
30
```

QPAC2 (MY) BOOT - (CONT'D)

```
450 LRESPR "flp2_WMAN"
460 LRESPR "flp2_HOT_ext"
470 LRESPR "flp2_QPAC2"
480 :
490 REMark ***** Load all the other extensions to SuperBASIC that we will use *****
500 LRESPR "flp2_menu_ext"
510 LRESPR "flp2_SERMOUSE"
520 LRESPR "flp2_ipcexts bin":REMark For HERMES users only.
530 LRESPR "flp2_hermbaud bin":REMark For HERMES users only.
540 LRESPR "flp2_pip":LRESPR "flp2_env_bin"
550 LRESPR "flp2_screenoff_ext":TIMEOUT 30000
560 LRESPR "flp2_XTRAS":REMark For The EDITOR
570 LRESPR "flp2_Qtyp_spell":REMark For TEXT87
580 :
590 HOT GO
600 ERT HOT_PICK ('b','') : REMark use "ALT" & "b" to go to SuperBasic
610 HOT DO b
620 IPCEXT 6: REMark For HERMES users only.
630 REMark Now open your windows to suit
640 OPEN#1,con : OPEN#2,con : WINDOW 512,256,0,0:CLS : FOR i=0,2,1 : j=NOT i :
WINDOW#i,512-208*(i=2),202-152*j,0,206*j : BORDER#i,NOT j,0,6 :INK#i,7-3*i : PAPER 0 :
PAPER #2,4 : PAPER #0,0::CSIZE#i,0,0 : CLS#i

650 CSIZE 3,1:AT 5,9:PRINT "BOB MADARIS 1994" : REMark change to your logo.
660 CSIZE 2,1
670 rx0%=RXBAUD%(64+1): REMark For HERMES users only.
680 rx0%=RXBAUD%(200+4): REMark For HERMES users only.
690 BAUD 9600
700 PRINT "BAUD = ";BAUDRATE
710 PRINT "SER1 INPUT = ";IN1BAUD: REMark HERMES users only.
720 PRINT "SER2 INPUT = ";IN2BAUD: REMark HERMES users only.
730 REMark ***** Set up some Executable Things as buttons *****
740 BT_WAKE "Channels",,,,1
750 BT_WAKE "Exec",,,,1
760 BT_WAKE "Files",,,,1
770 BT_WAKE "Hotjobs",,,,1
780 BT_WAKE "Hotkeys",,,,1
790 BT_WAKE "Jobs",,,,1
800 BT_WAKE "Pick",,,,1
810 BT_WAKE "Rjob",,,,1
820 BT_WAKE "Sysdef",,,,1
830 BT_WAKE "Things",,,,1
840 BT_WAKE "Wake",,,,1
850 :
860 REMark ***** Set up some keys as HOTKEYs *****
870 ERT HOT_WAKE ("0","BUTTON PICK") : REMark "ALT" & "0" to put buttons on screen
880 ERT HOT_RES1 ("1","xchange","XCHANGE",p,300) :REMark Make XCHANGE resident and limit
it to 300k . Change the 300 to suit your needs.

890 BT_HOTKEY "1","XCHANGE",,,,1
900 ERT HOT_RES1 ("2","lj","LONELY JOKER",f): REMark Make lj resident to play a little when time
permits.
```

QPAC2 (MY) BOOT - (CONT'D)

```
910 BT_HOTKEY "2","LONELY JOKER",,,1
920 ERT_HOT RES1 ("t","text87plus4","TEXT87",f):REMark Make TEXT87 resident
930 BT_HOTKEY "t","TEXT87",,,1
940 ERT_HOT RES1 ("e","edt bin","EDITOR",i,f):REMark Make The EDITOR resident
950 BT_HOTKEY "e","EDITOR",,,1
960 ERT_HOT RES1('h','hpdump','HPDUMP'):REMark For HP Deskjet users only. Thanks Simon
Goodwin and his DYI toolkit.

970 BT_HOTKEY 'h','HPDUMP',,,1
975 ERT_HOT RES1('k','calendar'):REMark QPAC 1 calendar
980 ERT_HOT_KEY ('d', Dm$ & D$(d TO 11) & ', ' & D$(1 TO 4)):REMark Put present date in
keyboard queue. When you need it in your work hit "ALT" & "d".

990 REMark Hot Key to cleanup basic windows
1000 ERT_HOT_KEY ("w",'open#1,con_ : open#2,con_ : window 512,256,0,0 : cls : for i=0,2,1 :
j=not i : window#i,512-208*(i=2),202-152*j,0,206*j : border#i,not j,0,6 : ink#i,7-3*i : paper 0 :
paper #2,4 : paper #0,0 : csize#i,0,0 : cls#i,"")

1010 HOT_DO b:REMark Start with Basic on top
1020 STOP
```

It takes a lot of trying to finally get every thing to suit your needs and wants. I change mine at least once every week or so. If I can be of any assistance to anyone on setting up a boot program for QPAC 2 please send a SASE and I would be glad to try to help. Robert C. Madaris - 41 Doty Drive - Trafford, AL 35172 - USA

WANTED/FOR SALE

WANTED: Information and parts for the PCML Q+ Disk interface. I am trying to repair this card which is missing C4 (a pal?) and D4 the eprom. I am interested in buying a broken complete PCML board or in borrowing a working eprom. I also would like to find a copy of the user manual. All postage and copying costs will be paid. Please write to: Don Waltermann, P.O. Box 176, Troy, MI 48099-0176 , USA

WANTED: Individuals willing to assemble speciality cables (modem, mouse, printer, etc.) for QL'ers with no soldering experience and /or unsteady hands. Please send your name, address and telephone number to IQLR for publication in an upcoming issue.

FOR SALE: One - two Meg GOLD CARD (issue #2 PCB) plus other QL odds and ends. For information contact Bob Dyl at IQLR.

QL < - > MSDOS < - > QXL

Pylesville, Maryland, USA - Thomas Robbins
e-mail Robbins4037@delphi.com



In previous articles, I have discussed file transfer techniques between the QL Psion suite and the 'de facto' MSDOS standard Lotus and Dbase programs. In this article, I will discuss the implantation of a QL brain into an MSDOS computer via Miracle Systems QXL.

As the documentation provided with the QXL is rather scant and does not cover some things it is important to know, I hope this will be of use to those just obtaining, or thinking of obtaining, a QXL.

I obtained a QXL at the 'Miracle in Newport II' in May 1994, with much agonizing over the choice between it and the SuperGoldCard. The decision was based on the fact that I do have a PC XT and often transfer files from work to QL format as I prefer the QL for most tasks.

PC System:
8088 PCXT 640k memory
3 1/2 1.44 Mb floppy
40 Mb IDE hard drive
CD ROM
1 parallel port/1 serial port
Internal Modem
SVGA Display Card
VGA Monochrome Monitor
Bus Mouse
MSDOS 6.2

QXL SYSTEM
QXL Card
V2.10 Software
QXL.EXE
SMSQ
WMAN
Hot_text & QPAC2
PTR_GEN

The QXL card came with two versions of the software. The earlier version did not work on my XT, reporting : "The QXL at IO address 02Boh is not responding"

Version 2.10 of the software loaded flawlessly and I was greeted with a QL screen about 20% smaller in width and 30% smaller in height than the monitor display. This screen was centered on the monitor. Since the QXL 'maps' the 512x256 pixel QL screen onto the PC monitor, which has a 640x350 pixel resolution in EGA mode, the QXL screen is smaller. The QXL software can be configured for four modes -QL (which was the default that loaded and gives the 512x256 pixel screen, EGA mode which gives a 640x350 screen, VGA mode which provide 640x480 and SVGA which gives an 800x600 pixel screen.

I next tried the EGA mode, and was presented with the same size QL screen, only this time in the upper left of the monitor. Pointer programs can be moved to the "unused" portions of the screen, and compiled superbasic programs can have their windows anywhere on the screen. Typing in "window #1,640,350,0,0:cls#1" gives a SuperBasic screen 640 pixels by 350 pixels. This allows the display of 126 characters accross the screen instead of the usual 85, with a similiar increase in the number of lines of characters. The effect of all this is that when running Quill or any other QL program that uses full screen display, the appearance is that of a 10 or 11 inch monitor inset into the upper left of the 14 inch monitor. I was somewhat concerned about this monitor display issue prior to obtaining the QXL, but have found it quite comfortable. In fact, I would like to eventually get a 17" monitor and run in the SVGA mode - when I find a pot of gold.

QL <-> MSDOS <-> QXL - (CONT'D)

The display size can be configured using the QJUMP Config program along with port assignments and other items. The Config is NOT supplied with the QXL software, but should be - probably an oversight. However, preconfigured versions of SMSQ for QL, EGA, VGA and SVGA are provided.

Next step - try and execute programs. The EX command returns a polite message "We regret to inform you that this facility is temporarily out of service". You need to use the TK2_ command just as on other QL systems. Quill, Easel, Abacus and Xchange - no problems. Editor - won't run. The documentation with the QXL states "There are several programs compiled using Turbo which will not run at the moment". This is correct - some run, some do not. David Santichiara has a brief article on the reasons and solutions for this in an article in QUANTA Vol. 10, Issue 11 December 1993.

The SuperBasic Interpreter is not complete and you can not run superbasic programs. As I routinely use Qliberator to compile my programs, this has not been an insurmountable problem - but it is inconvenient. I have every confidence that Miracle Systems will provide the SuperBasic software.

Okay - problem - you can not write a superbasic boot program, as there is no superbasic interpreter. The QXL will not handle line numbers. What you do is use an editor (I use QED) and write your boot program without line numbers, without procedures, without loops - all direct commands. My boot program for the QXL looks like this:

```
TK2_EXT
cls
window #2:320,300,0,0
window #1:320,300,320,0
window #0:640,40,0,310
cls #1:cls #2:cls#0
DATA_USE WIN1_SYS_
PROG_USE WIN1_SYS_
LRESPR PTR_GEN
LRESPR WMAN
print 'Pointer_Gen and Wman loaded'
remark LRESPR ThorOldGold_bin
LRESPR HOT_REXT
LRESPR QPAC2
print 'QPAC2'
LRESPR win1_qbase_code
ert hot load ('e','win1_qed.qed')
print 'Qed on key <e>'
ert hot load ('1','win1_xchange_exe')
print 'Xchange on key <1>'
ert hot wake ('x','Exec')
ert hot pick ('b','')
ert hot_wake ('h','Hotjobs')
ert hot_wake ('f','Files')
ert hot_wake ('p','Pick')
hot go
DATA USE win1
PROG use Win1
ex win1 keyfix obj
```


QL <-> MSDOS <-> QXL

Note the device "Win1 ". You can format win1 <size in megabytes> . This creates a file on the PC hard disk that is the QXL's hard disk - similiar in concept to both Conqueror and the MSDOS disk compression utilities. I initially found the disk access rather slow - I was running on a drive compressed with MSDOS Doublespace. When switching to an uncompressed drive, the access time improved significantly - although still not as fast as my old Miracle System hard drive/QL/Goldcard system. I suspect that running on an 8 bit XT bus slows the IO down considerably.

Next step -check out the parallel port - no problems.

I ran Eros Forenzi's QSI speed index and got a result indicating 3.24 times the speed of a gold card. I would be quite interested in what people using the QXL on a 16 or 32 bit bus PC obtain as a speed index.

Oh my - some of the keys seem to be in the wrong place. Open #5;par comes out as open £ (Pound Sterling symbol),par.

And " shows up as @, @ shows up as quote.

And no matter what key I press, no backslash.

It really puzzled me, untill I vaguely remebered seeing the keyboard layouts for various countries in one of the appendices of an old MSDOS manual. It turns out that the UK-English Keyboard layout and the US-English keyboard layouts are not quite identical. In fact, the UK-English keyboard has one more key than the US-English - my missing backslash key! The QXL maps the QL keyboard onto the UK-ENGLISH keyboard (if you use the QJUMP config program on SMSQ, it appears that there are French and German keyboard drivers that can be installed. This problem was easy to fix. The following superbasic program uses Simon Goodwin's QBASE extensions from his DIY Toolkit series. When compiled with Qliberator and run as a background task it swaps the keys back to their normal US-English locations. If you compile this, compile with the "windows off" option.

```
10 REPEAT KEYpoll
20 IF PEEK_W(163978)=CODE('£'):POKE_W 163978,0:TYPEIN (CHR$(194) & "#")
30 IF PEEK_W(163978)=CODE('#'):POKE_W 163978,0:TYPEIN (CHR$(194) & "£")
35 IF PEEK_W(163978)=CODE('@'):POKE_W 163978,0:TYPEIN (CHR$(194) & "'")
37 IF PEEK_W(163978)=CODE("'"):POKE_W 163978,0:TYPEIN (CHR$(194) & '@')
40 END REPEAT KEYpoll
50 :
60 DEFine PROCedure TYPEIN(A$)
70 DUMMY%=QUEUE%(A$)
80 END DEFine TYPEIN
```

You lose autorepeat on the swapped keys, but you do have autorepeat on all other keys.

This program appeared to slightly slow down keyboard entry on the Gold Card/QL system, but is unnoticable on the QXL.

You can either link the "QBASE" extension in at compile time or lrespr it prior to execing the compiled program.

The English keyboard driver appears to be located at around 011E00 in the SMSQ file and looks like it can be easily patched using any QL file editor.

QL <-> MSDOS <-> QXL - (CONT'D)

Next step - see if the mouse works. Since I have a bus mouse on the PC rather than the more conventional serial mouse, I thought I might have a problem. The mouse worked fine on the QPAC2 and other pointer environment programs. You must remember to load the MSDOS mouse driver extensions into the PC prior to starting the QXL.

MOUSE PROBLEMS:

The Qjump documentation included with QPAC2, the QIMI mouse and other qjump products states: *"If a job which is expecting keyboard input is at the top of the pile of windows and the pointer is not visible, the mouse may be used to emulate cursor and enter keystrokes. Pressing the right hand button will generate an enter keystroke, pressing the left hand button and moving the mouse will generate cursor keystrokes.... This can be used to drive programs ..."*

Actually, what it does is completely lock up the QXL in perfect emulation of a QL. Screen is there, cursor sullenly refusing to flash and keyboard totally unresponsive to anything. Nothing to do but reset. I have had the same problem on a Gold Card with QIMI mouse interface and the solution is the same. Use either the QJUMP config program or the QPAC2 Sysdef function found in the Exec menu and set the mouse settings down to acceleration 8 and wake up speed 2.

SECRETS OF THE UNIVERSE - UNDOCUMENTED COMMANDS

In viewing the SMSQ file, it appears there is a command "QXL EXT". There is no documentation on this, but when this command is invoked, two additional commands become available. These are CACHE_ON/CACHE_OFF and DISP_UPDATE n,n. Eros Forenzi has discussed his findings on the DISP_UPDATE command in Volume 10 Issue 11 of Quanta. Briefly, this command controls the display IO of the QXL. The higher the number, the smoother the scrolling/screen handling at the expense of raw processor speed. The default of DISP_UPDATE 2,2 gives approximately 3.5 times that of a gold card with reasonable screen response. DISP_UPDATE 0,0 gives 4.3 times the speed of a gold card, but the screen is only updated when a key is pressed. This should be quite a useful feature eg:

```
10 DEF PROC SOME_HORRENDOUS_CALCULATION
20 DISP_UPDATE 0,0
30 CALCULATE
40 DISP_UPDATE 2,2
50 END DEF
```

Turning off display update during the raw calculation, then on when it is finished gives the best of both worlds.

I assume the CACHE_ON/CACHE_OFF have to do with the CPU cache, but I do not know the performance changes or side effects this command has. Any information anyone out there has would be greatly appreciated.

SWAPPING BETWEEN MSDOS AND QDOS

I expect that the QXL could run under windows, allowing access to MSDOS, but not having a windows capable PC, I have not been able to experiment. Pressing the CTRL key and the scroll lock key leaves QDOS and returns you to the MSDOS prompt. You can do whatever necessary but probably unpleasant things you need to under MSDOS, then change back to the QXL MSDOS directory and enter QXL/ - this will return you to QDOS(well, actually SMSQ) exactly where you left off in less than a second. If you type QXL without the "/", you are returned to a new QL session.

QL <-> MSDOS <-> QXL - (CONT'D)

OTHER QUIRKS

There still seems to be a few problems with the keyboard IO. Occasionally, a stream of some character gets repeated to the screen - even though the keyboard is not in use. All of a sudden, something like ccccccccccccccccccccccc gets printed and keeps printing to the screen until a key is pressed. Occasionally, while scrolling, a random character or two gets printed to the screen (as if entered from the keyboard). These are not side effects of my keyfix program, as they occur whether it is running or not.

OVERALL IMPRESSION

9 out of 10 - I am extremely pleased with the QXL. As the operating system is software based, rather than hard coded into a ROM, I believe it is potentially much more expandable. The things I would really like to see are a superbasic interpreter, the ability to run all TURBO programs (most especially EDITOR) and direct access to files on the PC hard drive. I don't really miss access to the CD ROM drive as there are no QDOS CD ROMS! Another superb product from Miracle Systems and Stuart Honeyball.

(Editor's Note: GOOD NEWS Tom !! The latest version of the QXL software is speeding its way across the Atlantic, and we're told it contains SBASIC.)



GT-Prolog/QL

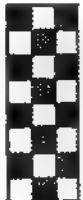


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DEV DEVICE and DEV_USE

Bangor, Gwynedd, GREAT BRITAIN - Dilwyn Jones

Many QL users now have access to level 2 directories on their systems, either through hard disks or through using HD or ED disks. It is easy enough to put software into these directories to make sure that individual disks or drives don't become cluttered with masses of small programs. But many QL programs were written by users who had no hard disk or level 2 filing systems and not many programs give you the facility to set up a program to work with sub-directories. The Gold Card manual hints at a way of doing this with the DEV device and DEV_USE commands, but doesn't really make it obvious because the clue is hidden amid the level of detail and options available. Read the notes about the DEV device in the manual first, then read this article and try it with the short example below.

Quite simply, copy the program's files into a subdirectory, use the DEV_USE command to assign default directories and finally rename the DEV device to respond to the usual FLP1 and FLP2 devices recognised by most software, in other words to 'magically' make the software work from hard disk or other subdirectory without change !

Take as an example Quill. Since Quill users tend to generate a lot of text files, it would be nice to be able to put Quill files into their own little 'slot' or 'folder' on the drive, so that extensive lists of files are only shown when we want them. We can create 2 directories like this:

MAKE_DIR WIN1_QUILL_

The program files live in WIN1_QUILL_QUILL. We can create a sub-directory to keep all the text files within.

MAKE_DIR WIN1_QUILL_DATA_

Therefore our text files could be saved as WIN1_QUILL_DATA_letter.doc, for example. NO IT COULDN'T - Quill won't allow long names like that ! Here is where the DEV device comes in useful.

Essentially what we now do is to leave the software itself alone and so it will normally only try to load and save to and from FLP1 and FLP2. But the QL will automatically change these names so that they appear to be WIN1_QUILL and WIN1_QUILL_DATA respectively, giving a nice simple automatic way of using directories with minimum effort from the user and no need to make tricky changes to software.

We can set up two DEV devices, one to access the help files, printer driver and so on. Assuming you have configured Quill to load HELP files from FLP1, to access its PRINTER dat driver file from FLP1, to load and save files from FLP2 and so on, it will now fetch them from the directories

```
100 DEV_USE 1, WIN1_QUILL_
110 DEV_USE 2, WIN1_QUILL_DATA_
120 DEV_USE 'FLP'
```

Therefore, every time you tell Quill to save a file as 'FLP2 LETTER.doc' it will actually become WIN1_QUILL_DATA_LETTER.DOC. Every time you ask Quill to list files on FLP2, it will actually list files on WIN1_QUILL_DATA_.

DEV DEVICE and DEV_USE - (CONT'D)

You need to save a short basic program like that for each program, which is a lot less work than modifying all your programs. Use it in place of a normal boot program (rename the normal boot program to 'BOOT2' for example, and save this as a BOOT (in the relevant directory).

ONE PROBLEM REMAINS. You can't use the floppy disks now! Any reference to FLP1_ and FLP2_ is automatically made a reference to the hard disk. The answer is to rename the floppy drivers too since you won't be using them very much when using hard disks. Try the command FLP_USE 'fdv' to rename the floppy disks from FLP to FDV (FDV as opposed to MDV for microdrives). So you can access the floppy drives using FDV1_ and FDV2_ instead of FLP1_ or FLP2_.

This is something which will take time to understand and master, but it can't be explained any simpler than this. Clearly there will be exceptions, programs which will fail to work (e.g. protected microdrive software) and some programs will need more than two DEVs set up, but at least here is a working example which shows how simple it can be! Oh yes, don't forget to reset the devices after using the program with the command DEV_USE 'DEV' and possibly FLP_USE 'FLP' if you have used that too.

(NOTICE: Ensure you reset settings to NORMAL when leaving the program in use. The "DEV_USE" by itself will cancel the DEV setting. Failing to cancel settings will affect your next program.)

"PATHS" ON THE QL

Bangor, Gwynedd, Great Britain - Dilwyn Jones

Following on from the article above using the DEV device on Gold Cards to adapt software to run from subdirectories on ED disks or from hard disks, I now present the second part of this treatise on DEV. This time I show how to use it to implement a facility along the lines of PATH on a PC.

What this means is that in effect you can type in LOAD 'myprog' without having to remember or set the subdirectory name. Great eh? So why hasn't anyone told us about this before?

Basically, it needs the combination of two facilities available on the Gold Card. It will normally only work with software which uses the Toolkit 2 DATA_USE or PROG_USE defaults. BASIC is a good example of this - you can make excellent use of this facility just by using the LOAD or EXEC command. Be a little wary of using SAVE etc in this way because you may never know just where the file was saved to!!!

The Gold Card manual explains that by using a third parameter in the DEV_USE command, you can create links in a chain of DEV device names. So if you try to load from DEV1_ and it fails, it will also try the DEV2_ name and so on. Now by making the Toolkit 2 defaults point to the DEV device, we can make the system look through up to 8 directories to find the file we want!

The example below is only a simple example and I'm sure you will adapt it to your requirements. It is shown for hard disks only (simply change WIN1 to FLP1 for use with ED floppy disks for example) with 7 subdirectories for commonly used programs.

"PATHS" ON THE QL - (CONT'D)

```
100 REMark further uses of DEV with sub directories
110 REMark this emulates the PATH facility of the PC
120 :
130 REMark set up an 8 link DEV chain for common program directories
140 REMark change these to whatever you normally use
150 DEV_USE 1,WIN1_,2
160 DEV_USE 2,WIN1_QUILL_,3
170 DEV_USE 3,WIN1_ARCHIVE_,4
180 DEV_USE 4,WIN1_ABACUS_,5
190 DEV_USE 5,WIN1_EASEL_,6
200 DEV_USE 6,WIN1_PERFECTION_,7
210 DEV_USE 7,WIN1_TEXT87_,8
220 DEV_USE 8,WIN1_BASIC_
230 :
240 REMark make Toolkit 2 defaults look through DEV chain too
250 DATA_USE dev1_
260 PROG_USE dev1_
270 :
280 REMark all references now to LOAD myprog or EXEC archive for
290 REMark example will load or exec the program wherever it's hiding!
300 REMark only works with software which checks Toolkit 2 defaults,
310 REMark obviously and is best not used when saving.
```

Suppose you try to load WIN1_BASIC_myprog_bas, but couldn't remember where it had been saved. You could, after running that program, use LOAD 'myprog_bas'. The QL would try to load it as just that, and fail. Normally this would give an error such as 'not found'. But first the QL adds the toolkit 2 default before trying again as LOAD DEV1_myprog_bas. This would be the same as LOAD win1_myprog_bas. But it is not found there and LOAD looks set to give up. But the QL notices that there is a link from DEV1_setting to DEV2_setting.

So the QL now tries as WIN1_quill_myprog_bas. And fails again! But there is another link to the Archive directory (Archive, for USA readers, is the European name for the DB database supplied with the QL, Quill is WP and so on). So the QL tries WIN1_archive_myprog_bas. This fails and it tries all the links in the chain until WIN1_basic_myprog_bas and finally succeeds!

You may well be thinking that this can be slow, looking for various directories. It is not too bad on a hard disk or an ED disk, but it does become slow if there are accesses to drives which contain no floppy disks (and on my system makes an awful noise for ages trying to access the disk, I don't suggest you try it!!!).

The simple answer to the problem of speed of search is to put the most commonly used subdirectories at the start of the list. So if the two greatest uses you make of your QL are to use the word processor and superbasic, make those into the DEV1 and DEV2 settings.

You may also like to experiment with DEV_USE 'FLP' as hinted in the previous article to make this work with software which does not support toolkit 2 defaults, but be very careful when saving, it is all too easy to lose files by accidentally storing them in the wrong directory!

While experimenting, what I did to prevent the risk of trashing the hard disk was to use a formatted ED disk or ramdisk, with the FLP or ram driver renamed as WIN with the FLP_USE WIN or RAM USE win commands.

"PATHS" ON THE QL - (CONT'D)

I created the directories required to experiment with the MAKE_DIR command, copied a few files into them, and renamed the device with FLP_USE_WIN or RAM_USE_WIN. By now, I had devices renamed, devices which were ignored and defaults and chains all over the place and had myself totally confused by the end of it all, even though I'd managed to learn enough to get it to work, what I didn't like was the thought of unravelling everything again!

Please note the warning in the Gold Card manual - "it is easy to become confused about the settings". You need a clear head to keep track of what's going on, so if in doubt, don't use this facility even though it is potentially useful when used with care!

Although this is only useable on the Gold and Super Gold Cards, users with other interfaces such as Trump Card which do not support the DEV device can use fairly similar utilities called PATH and SUB written by ex-Quanta chairman Phil Borman. These are available from Quanta's software library.

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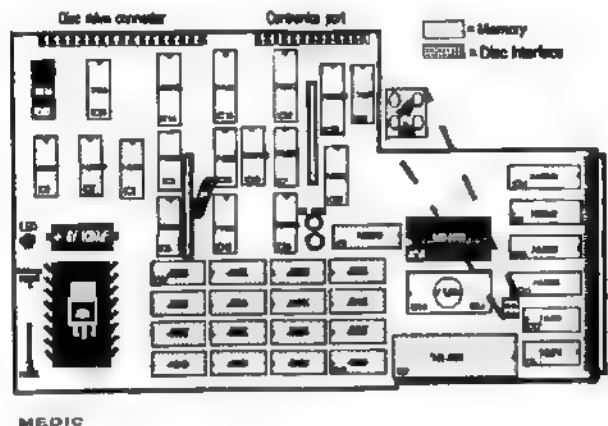
QL INTERFACES

Admaston, Telford, GREAT BRITAIN - Dennis Briggs

Over the years there has been many add-ons for the QL. Here are drawings of many of them so that you may identify them easily. If you have one that is not mentioned, then please write to me via the editor of IQLR to help complete the library.

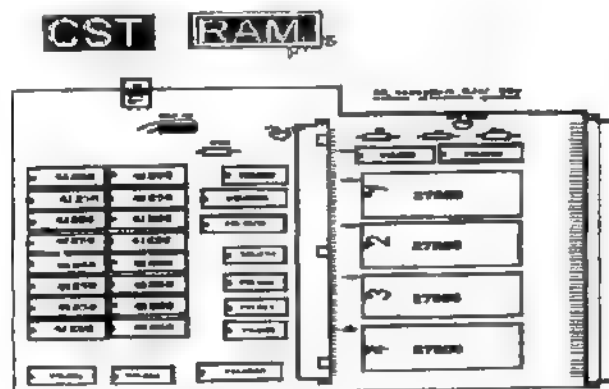
MEDIC - One of the earliest and possibly one of the best boards around albeit very expensive. It has a much vaunted multi layer pcb. Originally it had the silly idea of powering the board down the disk drive signal cable. Unfortunately they fitted the connector to the ribbon cable backwards with the result that the cable melted and a few chips on the board died. Usually it is just the two disk drive buffer chips which suffer.

Disk interface, Centronics interface and up to 512K of memory. Dai Griffin produced a circuit diagram whilst QJUMP produced the V 1.18 ROM.

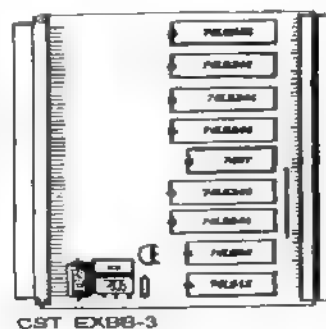


MEDIC

CST - Now there's a name to conjure with. A good early effort with great potential. The disk interface plugs in over the memory board. There is also provision for four EPROMs or static RAMs.

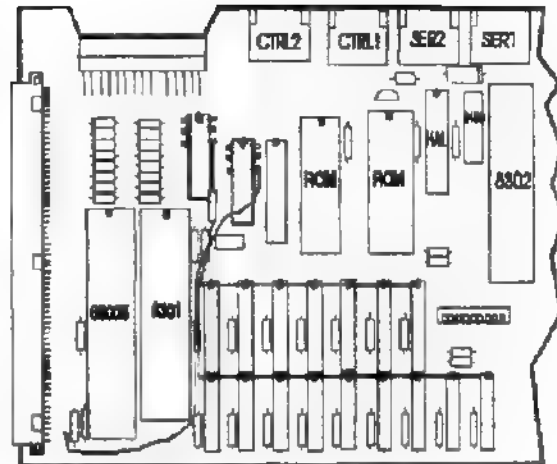


CST - Produced a buffer board based on an unproven assumption from SINCLAIR. In practice buffer chips had to be fitted to all the expansion boards therefore this board buffered all the lines already buffered along with those which did not need buffering. (See QUEST)

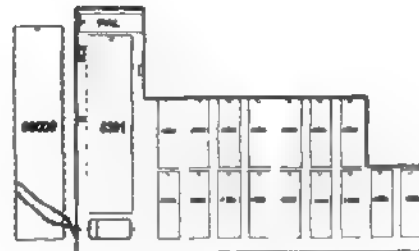


QL INTERFACES - (CONT'D)

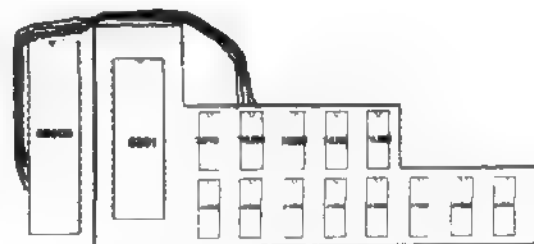
To avoid bits hanging out of the end of the QL, several manufactures produced an internal 512K memory expansion upgrade. Here is the solder in CST version.



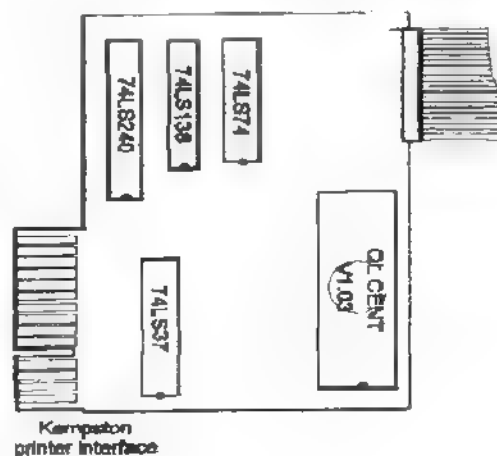
This is a plug in version of an internal expansion sold by STRONG COMPUTERS of South Wales.



Another one of unknown manufacture on the same theme, probably from PCML.

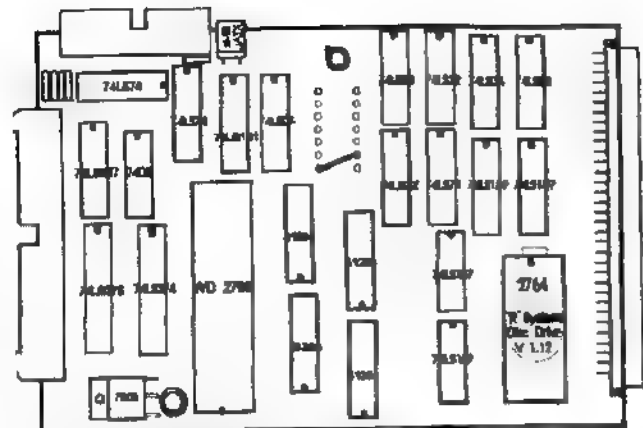


KEMPSTON - Produced a Centronics card to fit in the ROM port. The tiny bit of code is in EPROM but there is no provision for fitting a larger one to hold this code and TK2. The later MIRACLE Gold Card prevents the Kempston card functioning correctly as it interferes with A0 address line.



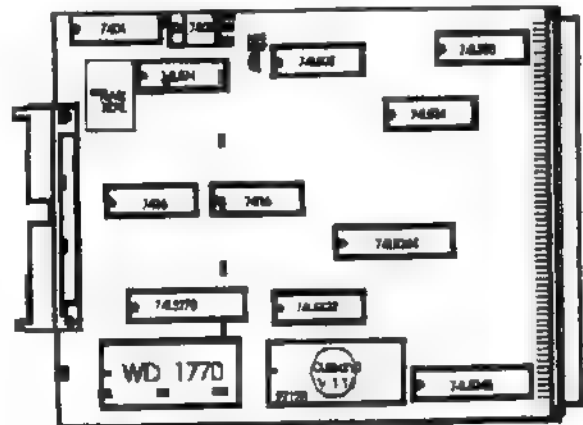
QL INTERFACES - (CONT'D)

TR SYSTEMS - A disk interface with or without 128K of additional memory plus a parallel printer port. The additional holes on the board are probably to increase the memory size to 512K. I have not seen a full 512K version therefore have no knowledge of what chips are required. The ROM V1.12 has a peculiar early FORMAT routine doing 3 passes over the disk. Also it takes at least 3 tries to get a directory.



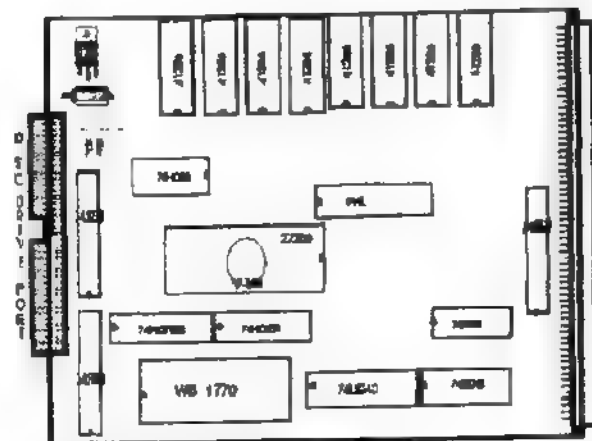
DELTA TR Systems board

CUMANA - Produced a very nice reliable disk interface and matched it up with some badged disk drives. If there is a bit of wire on the back it is simply to pull the EPROM CE line to ground. If a PROM is used the CE line goes to +5 volts.



CUMANA DISC INTERFACE

PCML - Marketed a disk interface and 256K expansion card. The essential part of the QJUMP code is on EPROM. Problems are that the QL will crash if all the memory is used, also there is a PAL used whose code is unknown.

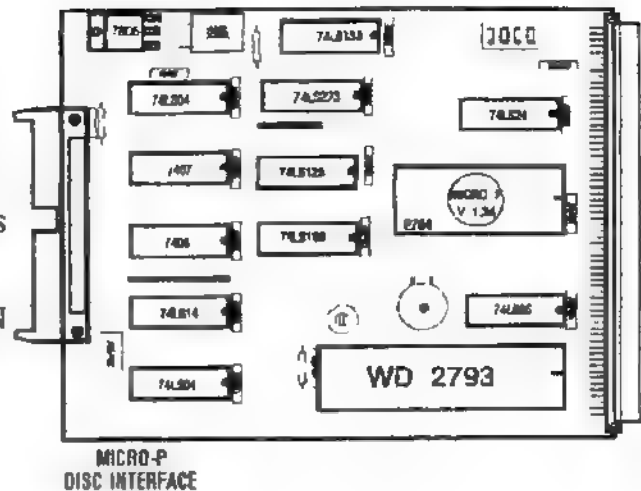


PCML Q+ BOARD

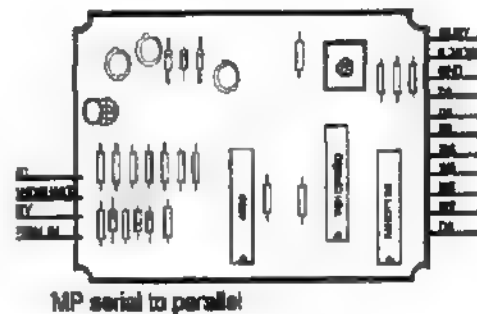
QL INTERFACES - (CONT'D)

MICRO PERIPHERALS - This company manufactured 100's of disk interfaces selling just a few score. The original ROM code is peculiar to say the least. QJUMP provided an upgraded ROM to make it compatible with other QJUMP products and also provided a special version for ADMAN SERVICES. The new ROM makes the DIL switches inoperative. A circuit diagram is available.

The MP disk drives were just cased NEC or EPSON units with the power supply halfway down a long cable. No ventilation or cooling was provided for it so the transformer just burns to a crisp.

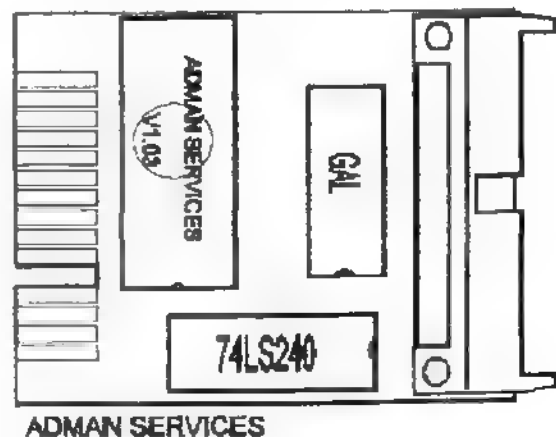


MICRO PERIPHERALS also produced a serial to parallel converter in a little black box. They use ordinary components so are serviceable. One of the chips is pushed beyond its design limits but the board works OK provided bodged soldering does not introduce stray capacitance.



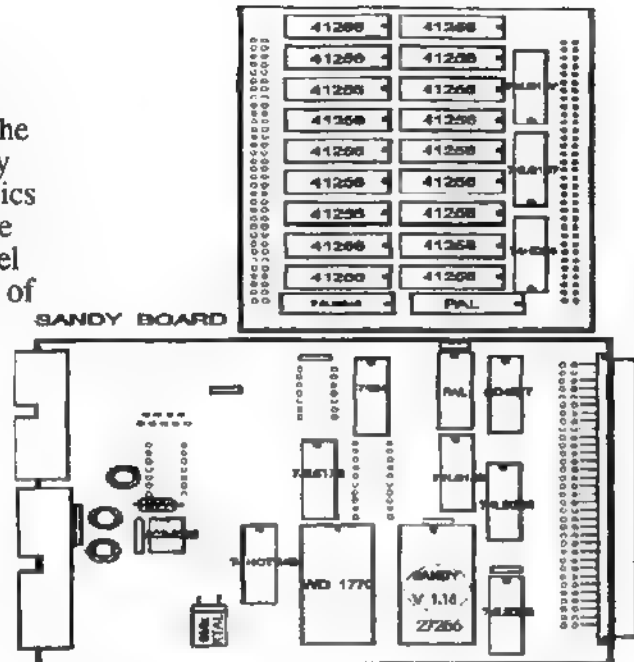
As printers became faster, William James designed a Centronics card to fit in the ROM slot.

ADMAN SERVICES put it on the market to work with any QL setup apart from the GOLD CARD.

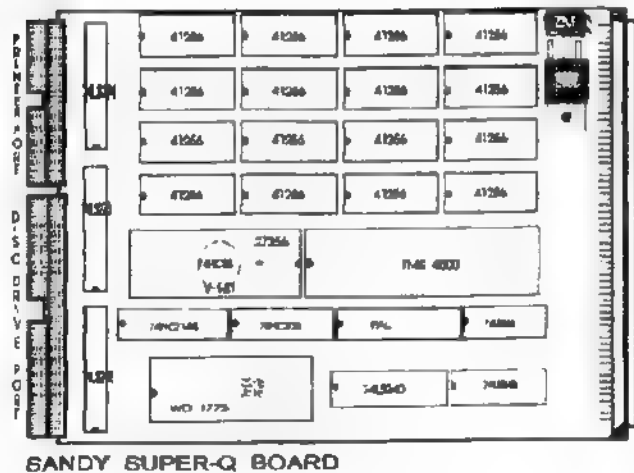


QL INTERFACES - (CONT'D)

SANDY - Two of their disk interface/memory cards are shown here. The first one has a memory board piggy backed over the disk interface board. The unpopulated holes are for a mouse which would only work with a small amount of software. The Centronics printer port was of doubtful benefit at the time as the printers were very slow. Some 8 years later a parallel printer port is virtually essential for the fast printers of today.

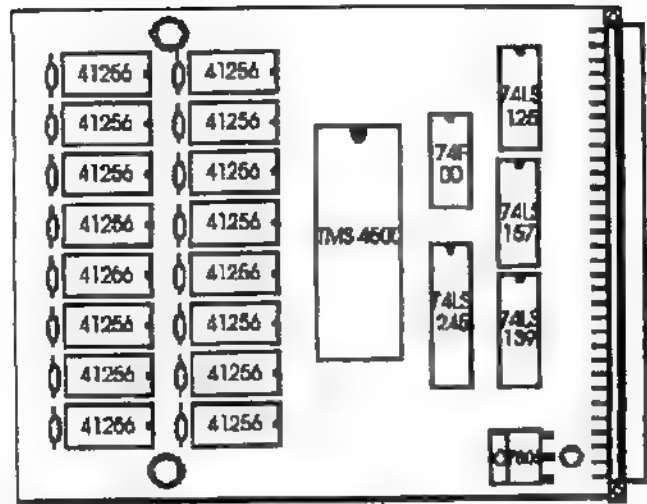


This SANDY produced board is probably of earlier origin as it uses the TMS 4500 memory controller chip. Again this has a parallel printer port.



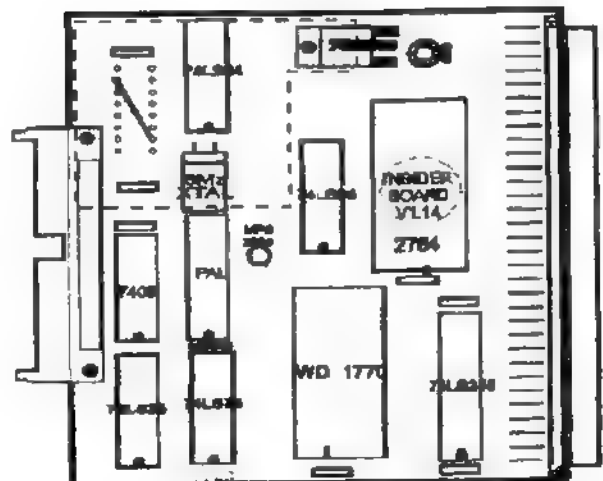
QL INTERFACES - (CONT'D)

SIMPLEX DATA - An early memory expansion board using the TMS 4500 chip. No through connector therefore it cannot be used directly with a disk interface.



Simplex memory expansion

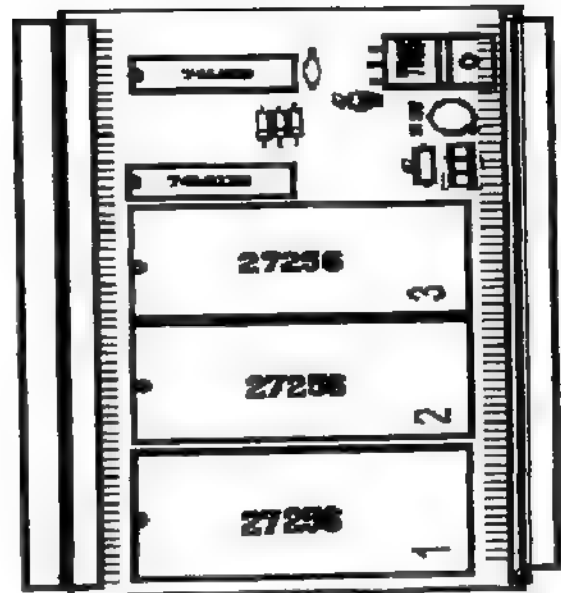
INSIDER BOARD - From a designer who hated the idea of bits sticking out of the QL. All that can be seen is the essential disk drive connector. The FORMAT routine is peculiar in that it has three goes at the disk.



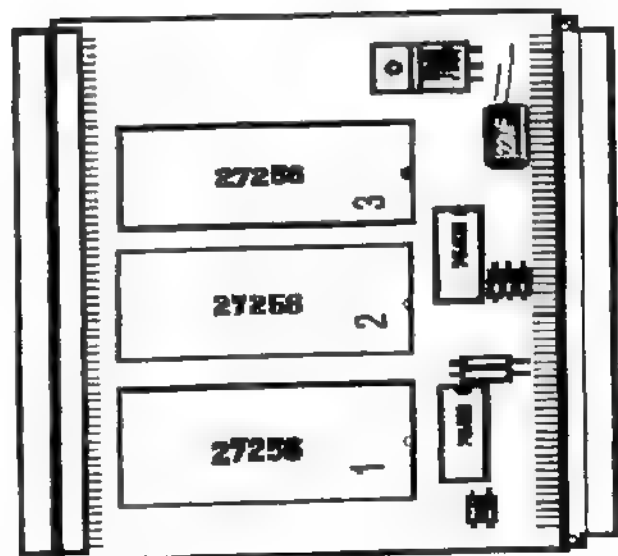
QL INTERFACES - (CONT'D)

SPEM of Italy produced a short card to hold three EPROMs. It needs some agility to fit it and even more to extract it without damage. Very few were sold as ready coded EPROMs were pricey and difficult to obtain. It tends to crash the QL readily without the simple modification of a small electrolytic on the output side of the regulator. You will have to rack your brains to make extracting the board from the QL easy.

The Sinclair/Dixons demo board was very similar but without the through connector.

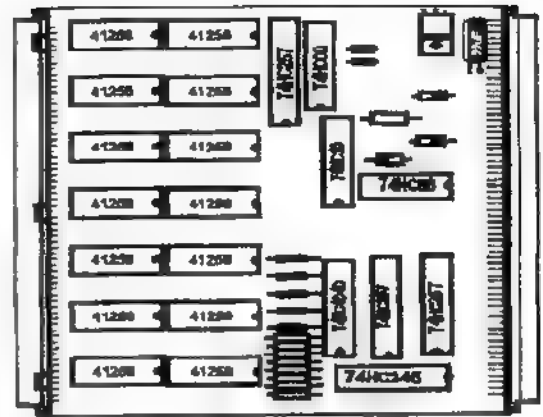


TERRY HARMON with the help of others produced a similar board of slightly larger dimensions. This made extraction easier but there are problems in using ROMs other than JS or later. The easy hardware solution is to use fast logic chips. The essential access to the SP lines involves cutting tracks and soldering in wires.

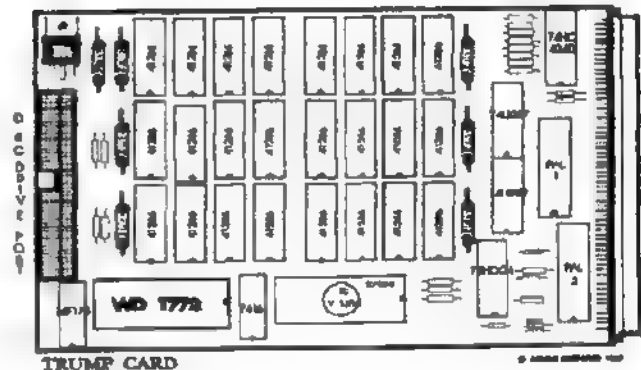


QL INTERFACES - (CONT'D)

MIRACLE - The Expanderam was one of their early products to allow large programs to be run on the QL. It was notable at the time as it avoided the use of the now obsolete TMS 4500 chip.



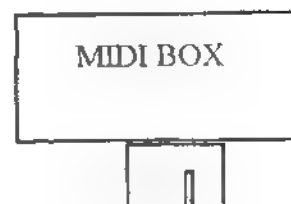
The MIRACLE Trump Card is a disk interface combined with the provision for larger amounts of memory up to 768K. PALs are used to address the extra memory. A tiny extra board is needed if more than two disk drives are daisy chained. The Trey card was a Trump Card without the memory. Just sticking the extra memory chips in will not work as different PALs are needed.



A tiny modem which is not BABT approved.



A MIDI interface. This had great promise but never materialised into a useful unit. The problem appears to be in relation to synchronising the QL signals with the MIDI clock signals.



QL INTERFACES - (CONT'D)

MIRACLE - SERIAL to PARALLEL converter to drive printers with a Centronics input. Later on it was reduced in size with SMD components.

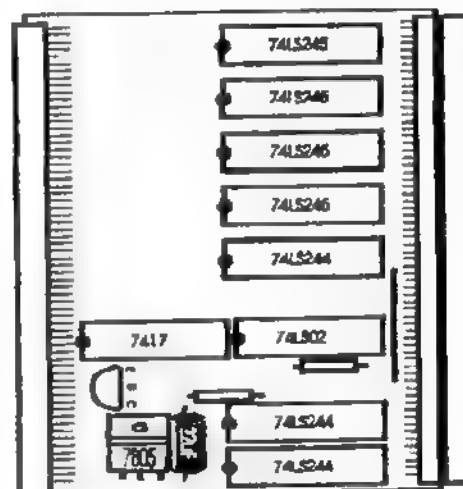
(Drawing Not Available)

MIRACLE GOLD CARD - To overcome the snails pace and memory restrictions of the standard QL an expansion card was built using a faster CPU. It also has 2 megs of memory and can accommodate DD, HD and ED disk drives.

(Drawing Not Available)

QUEST - Several items brought out at enormous expense in the very early days.

1. Disk interface with a large problem in that the code to make it work had to be loaded from a microdrive cartridge whenever the machine was reset. If you are a glutton for punishment the code could be transferred to EPROM then popped in the EPROM slot.
2. A hugh lump of metal, appearing to be bullet proof, on which the QL sat. Hidden away in this desk defying enclosure was a full 128K of memory. Yowee!
3. A paddle board to buffer all the lines that didn't need buffering along with those that were already buffered.
4. A 1 to 3 way horizontal expansion board needing another power supply. I have never found a use for this one except as an aerial for my TV. Great reception.



DS ENTERPRISES - Dave Stornton imported a French DATEL interface to be mated up with some dodgy salvaged Olivetti disk drives. The code on the interface operated in a similar way to the QJUMP code but had different key words. No info.

QJUMP - Tony Tebby's foray into the hardware field was in manufacturing a mouse interface board as an essential part of his QPointer software environment. Next came the QEP 3 EPROM programmer, it is a classic of design for the QL with the little used feature that the code will multitask.

SMILING MOUSE - This consisted of a narrow pcb on the end of an ATARI mouse cable to enable it to be plugged into the ROM port. Movement of the mouse flexed the cable causing the board to drop out. A certain amount of games slanted software enabled the mouse but it clashed with other software.

DIY TOOLKIT

As you may already have heard, Sinclair QL World is closing with effect from the forthcoming issue, Volume 3 Number 5. Sadly this marks the end of the long-running DIY Toolkit series, started by Marcus Jeffrey in 1987 and subsequently developed into some 70 articles and 24 software-packed volumes by Simon N Goodwin and Phil 'Taskforce' Spink.

These volumes remain available from Dr. Bill Fuggle for the time being, and have been updated to take account of the latest improvements in Qdos. The organisers regret to announce that it will no longer be viable to supply volumes on disk or microdrive after the end of September 1994, and ask enthusiasts to send in orders for any new volumes or updates before that date.

The address is unchanged: Dr. Bill Fuggle, DIY Toolkit, 86 Lordswood Road, Harborne, Birmingham B17 9BY, UK. Please make cheques payable to DIY Toolkit, at £3 Sterling per volume required. Orders for two or more volumes will be accompanied by laser-printed documentation, at no extra charge.

The most recent updates include a revised pointer driver for 'noisy' or erratic two button mice (with added ESC key emulation), 'Packbits' file compression routines, HD and ED disk renamers, and a fix for rogue MSEARCH patterns.

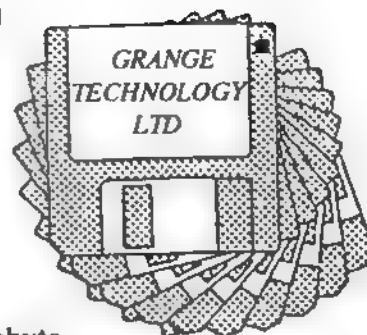
The authors would like to thank readers and disk purchasers for their support over the last seven years. Simon will remain active as an amateur Qdos enthusiast, and intends to continue to support the remaining QL publications as he has done in the past. Development of new DIY Toolkit volumes must stop, alas, as there is no longer a publisher in the QL Scene who can afford to fund the considerable work involved.

Simon N Goodwin, June 1994

GT - PROLOG - QL (Part 1)

Oak Ridge, Tennessee, USA - Mel LaVerne

Attempting to write a review of GT-Prolog (GTP) has proved to be rather more difficult than anticipated. There is, first of all, the necessity for familiarization with a new language. This, of course, was to be expected. What was not foreseen was the difficulty in reading (or rather, interpreting) the accompanying manual.



This review is necessarily written from the viewpoint of the neophyte, the newcomer to Prolog. Prior to this effort, my exposure to Prolog had been primarily through the popular, non-technical press and through some perusing of the QL Prolog manual.

For reference, all operation of GTP has been on a QL equipped with a Gold Card, v 2.32 and a Minerva rom, v 1.97.

GTP comes with a rather daunting manual of about 160 pages, approximately 40 in a "Workbench User Guide" (WUG), with the remainder in a "Reference Manual".

The Reference Manual is highly technical, assumes a good working knowledge of Prolog, and for the most part, seems about as accessible to the newcomer as, say, the "Handbook of Chemistry and Physics" would be to someone ignorant of either chemistry or physics. I will have little or nothing further to say on that portion of the overall manual.

Many manuals, and the WUG is no exception, tend to use jargon that "everyone knows" and fail to define many terms that we peasants do not know. For example, early in WUG, we find the statement "The null list value [] is not an atom.". How interesting! Nowhere, not even in the Reference Manual, did I find a definition of "atom". The best I've been able to dig up is that an atom is the name of something. The square brackets delimit a set of items separated by commas (i.e., a list). Hence, "[]", with nothing between brackets has the value of the empty, or null, list. So, what was being said was, simply put, "A value is not a name."

In IQLR III-5, GTP's author conceded that "information on Prolog within the QL community is somewhat lacking." He then provided an historical overview of Prolog and a brief description of how family relationships are written in Prolog. I believe it might be helpful in ensuring that we are all speaking the same language if I insert a very brief tutorial on Prolog before proceeding.

Prolog uses three kinds of statements: facts, rules, and queries. Facts define some relationship between or among given objects. Rules express new relationships among the given facts and/or rules. Finally, queries allow us to determine whether certain relations hold between objects. Obviously, Prolog is not confined to asserting family relationships. In the following, the operation of a simple digital circuit is described in a short Prolog program. In particular, we show how an "or" gate can be synthesized, using only "nand" gates.

Begin with the truth table for "or" and "nand":

x	y	or	nand
0	0	0	1
0	1	1	1
1	0	1	1
1	1	1	0

GT-PROLOG/QL - (CONT'D)

From the table we can write the "facts" about nand gates as:

```
nand(0,0,1).  nand(0,1,1).  nand(1,0,1).  nand(1,1,0).
```

These facts say that, for example, a gate with inputs 0 and 0 gives output 1 but inputs of 1 and 1 yield an output of 0. Note that each fact is terminated with a full stop (".").

The "rule" that defines an or gate, given the above facts, is:

```
or(X,Y,Z) :- nand(X,X,A), nand(Y,Y,B), nand(A,B,Z).
```

Here we assert that if we have a NAND gate with inputs X and output A, a second NAND gate with inputs Y and output B, and a third NAND gate with inputs A and B and output Z, then Z is the logical or of X and Y. Rules are also terminated with a full stop.

In the following Prolog program, "/*" and "*/" bracket a possibly multiple line comment. "%" declares the remainder of the same line to be a comment.

```
/* A sample Prolog program defining an OR gate in terms of 2-input NAND gates */
```

```
nand(0,0,1).          %Define the four possible states of a 2-input NAND gate
nand(0,1,1).
nand(1,0,1).
nand(1,1,0).
```

```
or(X,Y,Z) :-          % Now express the rule for the OR gate
nand(X,X,A),          % With inputs tied together, we get an inverter
nand(Y,Y,B),          % Similarly for the second gate
nand(A,B,Z).          % NAND the inverted inputs to get the OR of X and Y
```

Note that the quantities in the rule's parentheses are capitalized. This indicates that they are variables. More generally, the name of any quantity denotes a variable if it begins with a capital letter. Otherwise, we have a constant of some sort.

If we now ask Prolog (by way of a "query") what inputs to the or gate are required for, say, an output of zero, Prolog would respond with X=0, Y=0 and a request for "More (y/n) ?". Since there is only one solution, a "y" would result in a declaration that there is no other solution, and a reset for another query. A response of "n" simply resets for another query.

For the benefit of those who might like to investigate further, I have appended a bibliography of Prolog references that I have personally consulted at one time or another. They are ranked roughly in order of estimated difficulty, the easiest being first.

Turning now to the WUG, Chapters 1 and 2 are introductory and will be skipped over.

Chapter 3, Startup is where I first came a cropper. The instructions said that after loading the PRL (Prolog Runtime Library ?) file, GT-Prolog should be initiated with the command "exec GTProlog; flp2_Workbench BIPS". This indicated GTP to be on flp1 (default), with the Workbench expected by GTP to be on flp2 . It was further said that if no file were specified, the name would be requested later. Clearly, this offered a way out of the problem posed by having all files on one disk. At the prompt, the disk was placed in drive 2 and the name Workbench_BIPS entered. The immediate response was "Invalid bootfile - please respecify".

GT-PROLOG/QL - (CONT'D)

Not until 5 pages and 2 chapters later did I come across the statement that GTP makes no assumptions about device names, etc, and that full filenames (i.e., including drive specification) must be used.

In retrospect, had it been indicated that the "flp2_" was just a "for instance" or had the line about full filenames been presented earlier, I would not have fallen into the trap. Oh well, mea culpa.

To avoid any further problems on that score, I modified the Boot file to call TK2_EXT and added the command "EW GTProlog; flp1_Workbench BIPS". The exec command caused the initial screen to come up with a dead cursor (which a CTRL-C soon enlivened); EW cured that minor annoyance.

The Workbench provides a convenient overall manager for GTP that allows entry to all parts of the system through a variety of menus (Workbench, Database, Break, and Error). Displayed options may be selected by using the arrow keys to highlight the option and pressing Enter or by entering the letter capitalized in the option name.

Options available from the top level Workbench Menu are Query, Edit, Database, Restart, and eXit. Entering X or selecting eXit immediately terminates GTP. Restart causes re-entry afresh to the menu.

Entering Q or selecting Query causes entry into the query shell, an interactive interface that allows the user to ask questions (queries) about the current database. The shell starts the process by displaying the query prompt, ?-. If the user responds with a query having correct syntax, the query is executed. For instance, using the sample OR-gate problem, one could ask, say, for the second input and the output if the first input is zero. The dialog would be as follows:

```
?- or(0,Y,Z).
Y : 0
Z : 0
More (y/n) ?      (Response: y)
Y : 1
Z : 1
More (y/n) ?      (Response: y)
No (more) solutions

?-
```

The Text Editor is normally entered by selecting the Edit option of the Workbench menu. It may also be entered directly from the Query shell by responding to the query with "edit(filename)".

A third entry to the Editor is available from the Break menu, whose options are identical to those of the Workbench menu. A caution is in order here, however. If the Break menu is arrived at from the Editor, use of the Editor option will cause an "exception" (read that as "error"); recursive use of the Editor is frowned upon.

Commands to the Editor operate in three different modes: immediate, command line, and "quick key".

Immediate commands are such as text entry or deletion, cursor movement, or those initiated with a function key.

GT-PROLOG/QL - (CONT'D)

Each command of a command line consists of a command letter followed by parameters bracketed by matching delimiter characters. For example, `S/flp3_first_file/` would save the current edit file as `first_file` on `flp3`. Multiple commands may be used on a line if separated by spaces.

Finally, we have quick key commands such as `ALT+up` or down arrow key, which scrolls the text by one full page, or `ALT + B` to move to the bottom of the file. `ALT + X` ends an editing session, with the edit text being saved if it has been modified since loading or the last save.

Entering `ESC` during editing produces a break state, during which queries and other commands may be carried out. Exiting the break allows continuation of editing. This is part of the Workbench interface.

When I first spotted the word "Tutorial" in chapter 6 of the WUG, I turned eagerly to it, hoping to be enlightened on Prolog. I was quickly disillusioned, however. Beyond a rather sketchy description of what each procedure is intended to accomplish, the program is introduced bluntly with: "The code is as follows:". I must admit, though, that the author, quite early on, honestly stated that the manual was not intended to teach the Prolog language.

The "Tutorial" does give a very good introduction to the entire process of creating the Prolog program file, compiling it, and running the program. With it, I succeeded in producing and running my first (small) Prolog program with a minimum amount of stumbling.

I did have an interesting but baffling experience in running one of the programs on the master disk. There is a file on the disk, "Queens_full", containing a procedure "queens(n)" which solves the general problem of placing n queens on the chess board, with n ranging from 1 to 8.

This seemed like a good opportunity to answer the question "How many configurations are there for n queens?", where each configuration is a "safe" one. Following the "tutorial" instructions, I entered the query shell and, in response to the prompt, entered "queens(1)".

It was no surprise to me that the number of solutions turned out to be 8. The surprise came when, in response to the query prompt, I entered "queens(2)". The immediate response was to call up the "ERROR" menu, with "Fail" highlighted. The only option that allowed me to continue was "Succeed", which, of course, forces the system to accept the entry unless some other exception has occurred.

This hangup occurred for every entry, whether n was the same or different on successive queries. I have no explanation. Did I do something forbidden?

Incidentally, I found 8, 42, and 140 configurations for 1, 2, and 3 queens, respectively. Can anyone confirm (or deny) these figures?

Bibliography:

1. "A Prolog Primer", W. F. Clocksin.
BYTE, August 1987, pp. 147-150, 154, 156, 158

A good but brief introduction to Prolog, done in tutorial fashion. This article seems to predate Reference 3, since it refers to the second edition of the book. Demonstrates, among other things, an application of Prolog to the design of a digital circuit (not the one given above) using NAND gates.

GT-PROLOG/QL - (CONT'D)

2. "A Prolog Primer", J. B. Rogers

Addison-Wesley. 1986. ISBN 0-201-06467-7

This one is excellent for the rank beginner (like me !). The first 94 pages comprise a tutorial introducing much of the basics of Prolog. As with most of the references, there are notational deviations. Unfortunately, the book is out of print but may be available on the second-hand market (I obtained the book through an interlibrary loan).

3. "Programming in Prolog", W. F. Clocksin & C. S. Mellish.

Third Edition, Springer-Verlag. 1987. ISBN 0-387-17539-3

This is more advanced than Reference 2 but it does start off gently for the novice. Since this reference uses the Edinburgh protocol, differences from GTP are minimal and occur primarily in input to and responses from the operating system.

4. "QL Prolog", Hans Lub

Quanta Library, Languages disk LA 01

This initial adaptation of Prolog to the QL is available to Quanta members only (hint). It lacks some of the niceties of GTP, such as "tail-recursion optimization" and "garbage collection" but might be well worth playing with before taking the plunge with GTP. By the author's own admission, it is not "user-friendly" (but then, neither is GTP). As usual, there are notational variations from GTP.

5. "The Art of Prolog", L. Sterling & E. Shapiro.

MIT Press. 1986. ISBN 0-262-19250-0

Primarily for the advanced user but contains a number of examples that might be used for practice. Again, notational differences abound.

Scandinavian QL Meeting

Vastra Frolunda, SWEDEN - Johan Boman

The Swedish QL User Group is planning a QL meeting to be held on the 1st and 2nd of October 1994 in Gothenburg, Sweden. The exact location is yet to be decided upon, more details will be forwarded in good time before the meeting. It is our hope to attract a number of suppliers as well as English, German, American and other international actors on the QL scene.

For our part, we plan to present several of our members work, both hardware and software:

Different experimental and I/O cards

Digitizer

Plotter

Different ways of rebuilding the QL in different boxes etc.

The use of the QL in teaching at Chalmers University of Technology/Goteborg University

Mathematical and graphical toolkit (FREE to everyone who attends!)

We hope some of you are able to come. There are direct ferries from Kiel, Copenhagen, Fredrikshavn and Amsterdam for continental travellers and from Harwich, UK (or the Eurotunnel!....). Accommodations can be arranged. For more details contact:

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QL Public Domain Software

Reggio Emilia, ITALY - Davide Santachiara

"Software Available on the Communications Super Highway"

One thing lacking in IQLR at the moment is news about QL PD Software especially what is offered on the Communications Super Highway. As I have access to both Fidonet and Internet I thought that some examples would be in order.

1. **QFAX v1.6** from Jonathan Hudson is a new software package that allows QL users to send and receive Faxes with Class -2 modems. I have a ZyXEL modem and it works happily. A received FAX can be seen on screen and printed to Epson compatible 9/24 pin printers or HP LaserJets (or compatible). A FAX to be sent can be prepared with a standard editor or for that matter QUILL. QL screens or screen-cuts in pointer environment format can be included.

A Class-1 implementation from Lester Wareham is under beta testing. I think there are many a QL user interested in sending/receiving FAXES with their QL.

(Editor's Note: Class-2 modems are the newer more expensive fax modems on the market today. But, the prices keep coming down. Class-1 fax modems are the most plentiful and least expensive including what we believe to be the most QL compatible fax modem on the market, the US ROBOTICS Sportster 14,400 baud FAX MODEM. NO, we don't own stock in the company).

2. **Scheme LISP** has been ported on the QL thanks to C68. This is a very interesting and really powerful implementations of the original LISP from MIT, it comes with many examples and an algebraic evaluator.

3. **FORTH** Ewald Pfau of Austria has ported an ANSI implementation to the QL. It's probably the first Forth ANSI compiler available on any micro.

4. **Boris Jakubitz** from Octagon Berlin has released two interesting programs: one allows you to execute directly compressed programs (with ZOO, ZIP).

5. **Andreas Rudolf** of Germany ported a 68000/020/030 assembler (a UNIX cross compiler) to the QL.

6. **Philippe Troin** has written a great MINEFIELD program using the pointer environment. It works like Minesweeper under Windows. FREEWARE!

(Editor's Note: IQLR plans to be an active participant in the Public Domain/Shareware/Freeware scene. For those of our readers who have yet or cannot at present download the types of software listed, IQLR will be compiling a library of said software. The only cost will be for you to send a preformatted 3.5" disk and \$ to cover the return postage to you. In future issues we will print a listing of what is available.

Our first disk is: QL BBS MESSAGE READER by James D. Hunkins, please note Jim's article elsewhere in this issue.)

Cueshell

***The desktop program for all
QDOS compatible systems***

Cueshell is a graphically oriented desktop program, that is the program options are presented on the screen and the user has only to point at the option, normally with the mouse, to initiate the desired operation.

In practise this for instance means that to copy a file, the file is marked and then the target is simply pointed to. The destination (or a part of it) must simply be visible.

Cueshell is based on the Pointer Environment, a system extension which implements mouse pointer, menu structures and Hotkeys. The Pointer Environment comes with Cueshell.

Cueshell is intended to offer easy access to all everyday tasks on the computer. Cueshell is very fast, as it is completely written in Assembler, and runs on every extended QL.

Cueshell is the first choice desktop program for all systems with built in level 2 device drivers:
• flp level2 • Gold Card • QXL • Atari emulators including QVME •

Being a graphically controlled program, Cueshell offers features not available to QDOS until now:

- Dynamic catalogue window control • Up to 16 catalogue windows can be open •
- Object oriented file management, e.g. copying complete directory trees • Easy file rename (just type new name) •
- The form (position, size and sort order) of a catalogue window, can be saved and restored for any directory separately •
 - Additional file attribute control, write protect and invisible • User friendly configuration from within the program •
- Very comfortable view window with option to make _doc files easily readable and scrolling files forward and backward •

Cueshell costs DM 100.00 (£ 40.00) and is available from Dilwyn Jones Computing,
Jochen Merz Software or directly from us (eurocheques only)

Albin Hessler Software • Im Zeilfeld 25 • D-72631 Aichtal • Tel+Fax 07127-56280

MIRACLE in NEWPORT II

Newport, Rhode Island, USA - Bob Dyl

As most of you know, it's quite difficult to write about something you're so closely identified with. But, here goes anyway.

The show was held on the 14th of May 1994 at the Howard Johnson Motor Lodge in Middletown, Rhode Island, USA. Dispite the number of supplier cancellations in the two weeks prior to the show, attendance, while lower than expected, wasn't had at all. Most important was that QL'ers had a real good time, and the suppliers went home with pockets full of \$\$\$\$. Actually more was spent by a little better than 50% of the people who attended our first show in 1993. *(Stuart - Imagine what you could have taken home if you had Super Gold Cards with you !!!)*

The show had a real American flavor with most of the major North American User Groups represented. Some had displays and others demonstrations. Those in attendance included Hugh Howie of the Toronto (Canada) User Group, large delegations from NESQLUG (New England User Group who also had a membership table ably maned by Eric and Gary Norton), CATS (Capital Area User Group (Washington DC) with Mannie Quintero, Herb Schaaf and Tom Robbins), LIST (Long Island New York Group with Joe La Punzina, Ken Lang and Bob Gilder). I better stop now, if I've left you or your group out please forgive me.

The demonstrations drew keen interest. Many, including Stuart Honeyball, could be seen taking notes. Well, enough of this. The following is a pictorial view of the show with some notes.

MIRACLE in NEWPORT II - (CONT'D)



We caught Don Waltermann setting up QBOX-USA. We couldn't get a clear shot during the QBOX demonstration. Users were able to actually access the bulletin board at the show. John Impellizzeri is taking this photo.



In like fashion we caught Frank Davis (beard), Paul Holmgren bending down, of Mechanical Affinity getting ready for the onslaught of sales. The rather large object in the foreground is our publisher.



Stuart Honeyball of Miracle Systems holding court. The object drawing all the attention, is a Super Gold Card. (I could have auctioned mine off and bought two more. I just couldn't part with it.)



AL Boehm of NESQLUG demonstrating his fascinating Cloud Simulation Program, seen here running on a QXL. AL will soon make this package available as PD software.



Bill Cable of Wind & Wood Computing demonstrating his mega financial package QLERK. We hope to have a review of this package in an upcoming issue.



No, Bob Gilder of LIST isn't choking himself, just demonstrating the CL Systems "Real Time Digitiser" (the first time this unit has been shown in North America.)